

Bikes Etc

FOR ROAD CYCLISTS

IT'S TIME TO GET FIT!

20 TIPS FOR TRAINING HARDER, FASTER, SMARTER!

EXCLUSIVE

GRAEME OBREE
THE FLYING SCOTSMAN
SPEAKS OUT!

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MAKE YOU FASTER...
**PLUS 10 BONUS
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THE MONEY?

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A CYCLE COURIER
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PLUS

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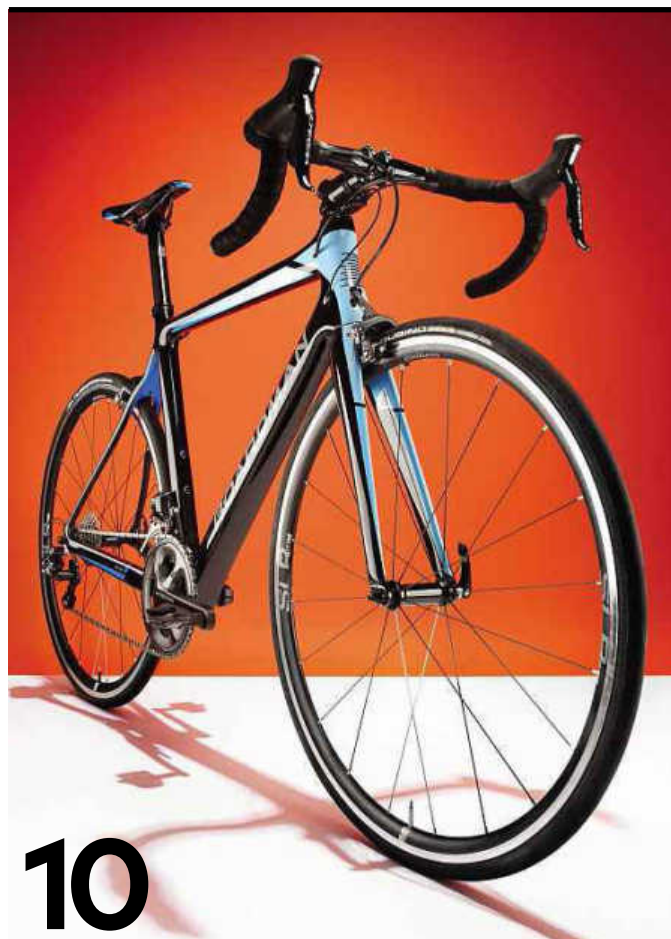


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Henry Carter

Bike: Boardman SLR
Endurance, £3,100,
boardmanbikes.com
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Kit: Kask Protone
helmet, £175,
velobrand.co.uk;
Smith PivLock V2
Max shades, £149,
smithoptics.com;
Chapeau Etape
Jersey, £70,
Chapeau Stripe
+ Hat arm warmers,
£25, Chapeau
thermal bibtights,
£90, all chapeau.cc;
GripGrab Insulator
long-finger gloves,
£30, wiggle.co.uk



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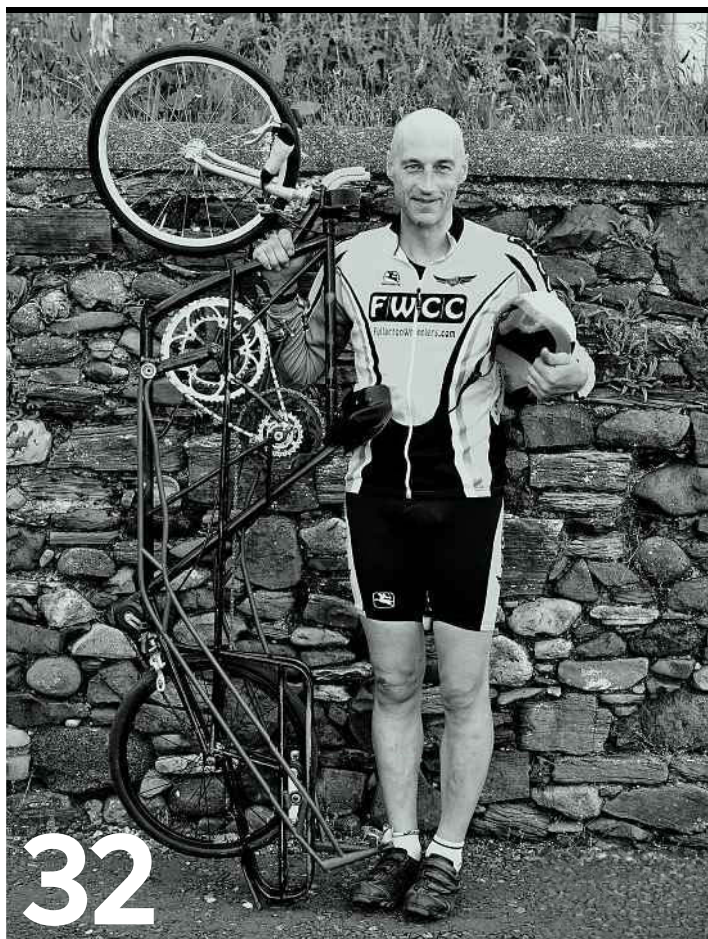
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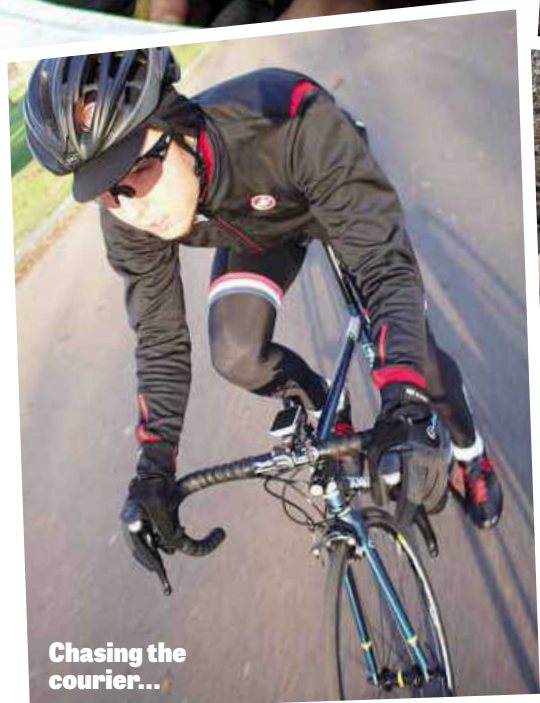


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Nick

Nick Soldinger,
Editor

ED'S LETTER

If any word has informed the making of this issue it's 'motivation' as we've gathered together a ton of information to help you prepare for the start of the cycling season. But what is motivation? What is the source of that invisible force with the power to move men from sofas to mountain tops?

The fact that our soggy corner of the planet is finally rotating out of winter's long shadow and back into the spring sunshine should be motivation enough to get many of you back in the saddle. But the truth is that what motivates and inspires us differs from person to person. For some cyclists it may be the curious buzz that's to be had

from suffering – that feeling you get when ride so hard that you drive your body to the extremes of its abilities. For others it may be the need to do something extraordinary with their lives such as tackle an epic ride. It may be the chance to break a personal best or see their name next to the King of the Mountain crown on Strava.

Ultimately, though, as the great Graeme Obree – who you'll find interviewed on page 32 – told us this month, whatever your motivation you should only ever really do something in life because you love it. And I hope you love reading this issue as much as we have putting it together for you.



OUT THERE WITH YOU

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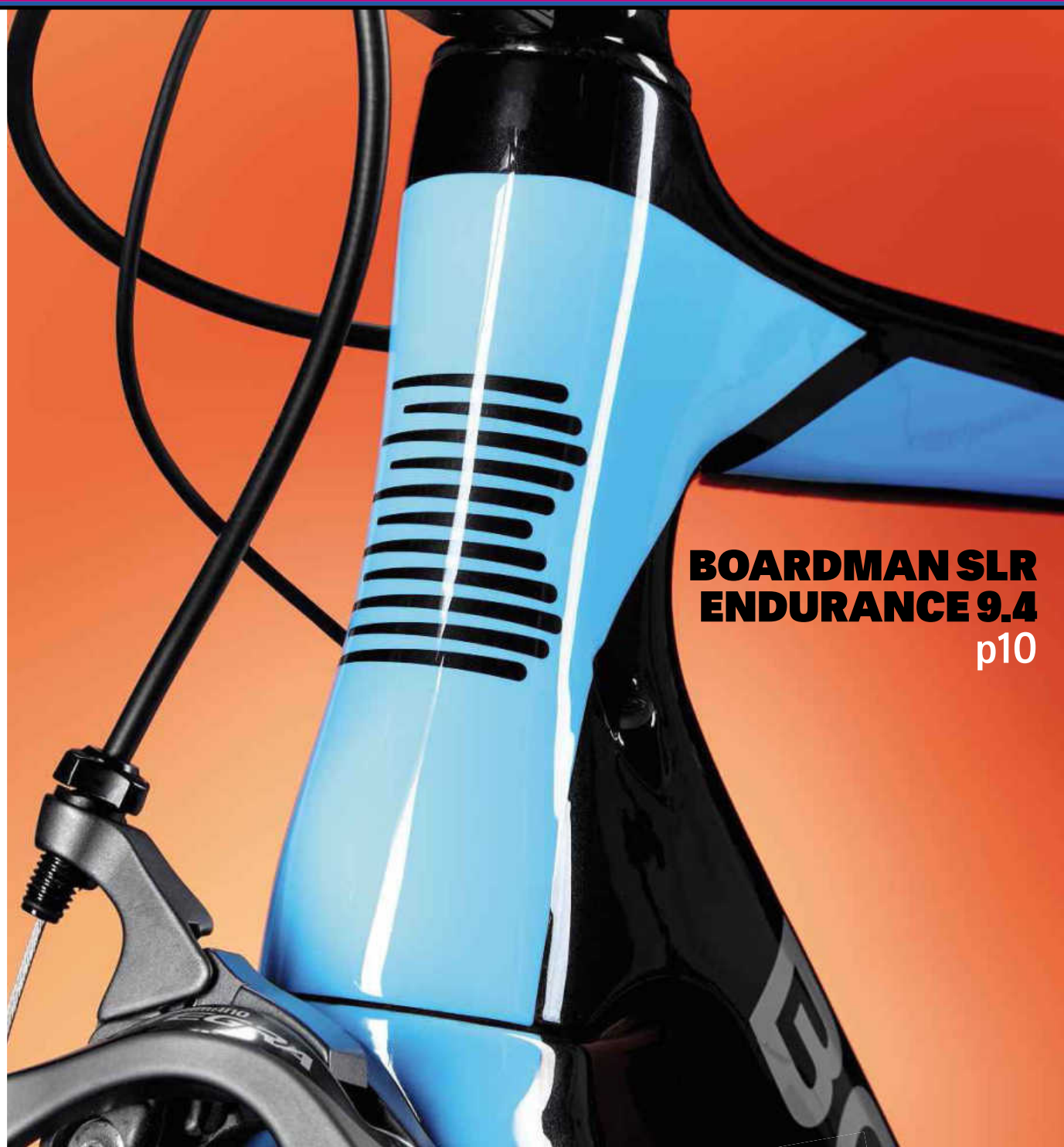
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NEW GEAR
LATEST TECH
RIDING TIPS

Départ

**BOARDMAN SLR
ENDURANCE 9.4**
p10



INSIDE
➔



Ribble Ti p13



Sufferfest p14



CTRL One p17



Aeroclam p17



Andre Greipel p18

10 REASONS YOU'LL LOVE THIS BIKE

The all-new Boardman SLR Endurance doesn't just look great, it's a lightweight, high-tech marvel



Frame: Boardman SLR Endurance C10 carbon, full carbon fork, tapered steerer, FSA BB-PF30

Groupset: Shimano Ultegra Di2

Chainset: Shimano Ultegra, 50/34

Cassette: Shimano Ultegra, 11-28

Brakes: Shimano Ultegra

Bars: Boardman Elite Alloy

Stem: Boardman Elite Carbon

Saddle: Prologo Nago Evo 141

Seatpost: Boardman Elite SLR Carbon Twenty

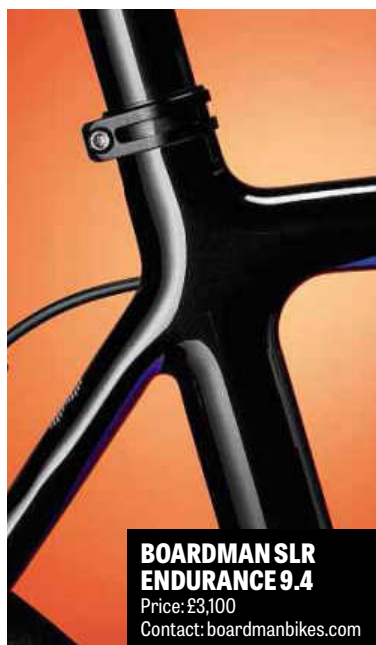
Wheels: Boardman SLR Elite Five, 28mm deep rims

Tyres: Vittoria Open Corsa CX, 25c

Weight: 7.57kg (size M/56)

Price: £3,100

Contact: boardmanbikes.com



BOARDMAN SLR ENDURANCE 9.4

Price: £3,100
Contact: boardmanbikes.com



1 IT'S A BRAND NEW BIKE

Boardman has thoroughly revamped its Elite range of high-end road bikes for 2016. Gone is the SLS line, absorbed into the redesigned SLR ('Super-Light Road') range, now available in 'Race' or 'Endurance' geometry.

2 IT'S A STUNNER

We love the updated logo and stylish colour scheme, but if stealth black with blue flashes isn't to your taste, you can order a custom paintjob from a choice of 17 colours, with matt or gloss finish. Pink with green highlights more your cup of tea? No problem!

3 IT'S A FEATHERWEIGHT

The new SLR certainly lives up to its name, the 9.4 tipping the *BikesEtc* scales at a svelte 7.57kg. This is in no small part thanks to a frame in Boardman's highest-grade C10 carbon fibre with a claimed weight of just 850g, designed using Finite Element Analysis (essentially removing material where it's not needed) to achieve an optimum balance of weight and strength. Bring on the hills!

4 IT'S A THOROUGHbred

Every component bar the FSA chain is from Shimano's superb Ultegra Di2 groupset, which means parts that are designed

to integrate seamlessly for smooth, reliable gear shifting.

5 IT'S FUTUREPROOF

The 9.4 comes with Ultegra Di2 as standard, but even if you opt for the entry-level 9.0 with mechanical gear shifting, the frame is ready to upgrade to electronic gears whenever you are. Choose the top-level 9.9 and you get SRAM's awesome wireless eTap groupset!

6 IT HAS DISC BRAKES

As well as the rim-braked model you see here, the SLR Endurance also comes with disc brakes – Shimano RS785 hydraulics on the 9.4 (£3,500).

7 IT'S IN TITANIUM, TOO

In redeveloping the SLR, Boardman's research and development team looked at all material options and concluded there was room in the range for the firm's first titanium bike – ideal for an endurance bike thanks to its high strength, corrosion resistance and compliance. And the hand-painted frame looks even better than the carbon version!


8 IT HAS GREAT WHEELS

Boardman's own-brand Elite Five wheels promise to be tough and reliable all-rounders, with sealed-cartridge bearings and butted stainless steel spokes (20 front, 24 rear), and stick to the bike's lightweight theme at a claimed 1,565g per set.

9 IT'S A GOOD FIT

The SLR Endurance comes in seven sizes, from XXS (50cm) to XXL (62cm) in 2cm increments – which should accommodate most riders.

10 IT'S A GREAT PRICE

Available direct from boardmanbikes.com at £3,100, the SLR Endurance 9.4 is a lot of bike for your money, while the 9.0 model with mechanical Ultegra shifters is an even more affordable £1,900. 



The SLR (Super-Light Road) lives up to its name, tipping the scales at a svelte 7.57kg

Any road, every day

UK designed for year-round performance



Designed and built to withstand whatever the weather or the road throws at you, Whyte's supremely versatile RD-7 disc brake road bikes promise year-round comfort and enjoyment.

The press agree – BikesEtc's review of the 2016 Whyte Dorset awarded it "Best In Test" and scored it 10/10 for its "fantastic ride quality". "It offers a fantastic all-round package. Although it's clearly designed with commuters in mind, it's capable of so much more than that. This is the definition of a versatile bike."

RD-7 Whyte Dorset

Bikes Etc Dec 2015



The Whyte RD-7 range starts at £799. For more information – or to try one for yourself, contact your local Whyte retailer.



whyte.bike



RIBBLE Ti SPORTIVE RACING**PRICE:** £1,300**CONTACT:** ribblecycles.co.uk

Staggeringly priced titanium

Say hi to affordable Ti thanks to those lovely chaps at Ribble

Really want a titanium bike? Really don't want to have to sell off a body part in order to afford one? It seems like Ribble may have the solution. Meet the company's new Ti Sportive Racing which can be yours for a mere (you might want to sit down) £1,299.95. To put that into perspective, last month, our Big Bike Test featured some of the best-value Ti bikes we could find, with all four rides

coming in at around £3k.

The Ti Sportive Racing's frame is made from aerospace industry-standard 3AL/2.5V titanium, and Ribble claims it offers a stiff yet comfortable ride to go with its old-school looks. Based around Ribble's relaxed sportive geometry with a more upright riding position. So a 55cm bike, for example, pairs a fairly tall 175mm head tube with a 557mm top tube.

To get the complete bike at this incredible price, it comes with Shimano's good-value but workmanlike Sora 9-speed groupset. If you've got a bit more to spend, though, Ribble's online bike-builder service lets you customise everything down to the width of the handlebars – we'd splash out an extra £145 for the full 105 groupset.

Still, a full titanium bike for this price? Not to be sniffed at.

Frame Ribble Ti Sportive Road Racing frame, ITM Alhena carbon fork

Groupset Shimano Sora 3500 9-speed double

Chainset Shimano Sora Double 3550, 50/34

Cassette Shimano HG50 9-speed, 12-23

Bars ITM Alcor 80, 31.8mm

Stem ITM Alcor 80

Saddle Selle Italia X1 Flow

Seatpost CSN Superleggera alloy, 27.2mm

Wheels Rodi Airline 5

Tyres Yaw Nitro Rigid, 23c

Price from £1,300

Contact ribblecycles.co.uk



Delivering old kit to the Giant store in north London



that he'd put out a shout for old cycling gear. Not for himself, you understand, but for Team Africa Rising – a charity which is aiming to help give people in conflict zones all over that troubled continent hope through the gift of cycling. You may think that sounds a bit far-fetched but the charity started its work in post-genocide Rwanda and has since helped bring Team Rwanda Cycling to the international stage.

The hope is to now repeat that success in Ethiopia and Eritrea and you can do your bit just

CYCLING STAR WANTS YOUR OLD SHORTS!

Send your unloved clobber abroad for a good cause

That Matt Brammeier is a good lad. We couldn't help but noticing on the Team Dimension Data's star's blog recently

by offloading bits of kit you no longer want or fits you. As you'd imagine, we have quite a lot of spare stuff kicking about *BikesEtc* towers and so we assembled a mixed package of helmets, glasses, shoes, bibshorts and summer cycling tops and took it along to the Giant Store in north London, which is one of eight designated collection points all over Britain and Ireland.

If you've got some gear that's still in a presentable condition but which you've fallen out of love with, why not treat it to a new life in Africa where it'll do some real good? As Matt says, 'Please don't include anything useless like odd socks, arm warmers, or clothing above a medium!' To find out more about Team Africa Rising, visit Matt's blog at mattbrammeier.wordpress.com



BikesEtc tries... SUFFERFEST

If going outside on the bike doesn't give you enough opportunity for pain, you can always try recreating the agony indoors...

■ WHAT EXACTLY IS 'SUFFERFEST'?

Much like a regular spin class, a Sufferfest session sees you sit atop an indoor exercise bike with loud music blasting in your ears. But while normal spin classes are specifically designed to help you lose a little weight, Sufferfest programmes are engineered to whoop your derrière while working on a certain aspect of your cycling prowess.

■ HOW DOES IT WORK?

Using Wattbikes, you and up to 20 others in a class brace yourselves as some of the World Tour's toughest races are projected on a massive screen in front of you. The heroic efforts of the pros push you more than any sweaty spin instructor ever could. Using the smart technology of the Wattbikes, your power, cadence and speed are measured. This will not only record your legendary output for later bragging rights, it also means you can keep track of what you're doing wrong and what you're doing right. Throughout the 'ride', you'll be asked to adjust your own effort, rating yourself on a scale of one to 10. These measurements help you recognise how each effort level feels, with 10 an all-out finish-line sprint and one a gentle warm-up.

■ WHY IS IT USEFUL FOR ROAD CYCLISTS?

By creating different sessions based on different objectives, Sufferfest can help you train for specific goals – everything from

improving your climbing to correcting your form on a bike. The intense nature of the sessions and the practicality of doing them in a fixed location mean you get a brutal beating without having to travel miles on your bike. The relatively short session times (20-100 minutes) allow you to theoretically do one in your lunch hour – something we took full advantage of when we nipped over to Lee Valley VeloPark for a 60-minute class. As we were newbies, we booked into a so-called 'Rubber Glove' session – essentially a time-trial-based class designed to discover our functional threshold power (FTP) – a good measure of our current fitness level.

■ WHAT ARE THE OTHER BENEFITS?

For some riders, Sufferfest is also a great way of getting back on the bike after injury. One rider we trained with at Lee Valley was, in fact, doing just that and showed us his recent war wounds to prove it – a scar the size of a small child down his right leg. He'd broken his femur last year and through the church of Sufferfest was getting back to peak fitness in a controlled manner.

What constitutes a 20 minute warm-up in Sufferland feels more like medieval torture



■ SO WHAT'S IT LIKE DOING ONE?

In short, hell. For our 'Rubber Glove' session we started off with a 20-minute warm up to get the blood flowing. What constitutes a warm-up in 'Sufferlandria' isn't what most normal folk would call a warm up – it's more like a medieval torture, like biking the gauntlet. In front of us, the huge projector was blasting images from the notorious Flanders Classics. While the faces of the pros became festooned with mud, ours started to become awash with sweat. Just when we were beginning to wonder when it would end, the video plastered messages across the screen to keep us motivated. 'Pain is good. Extreme pain is extremely good. Agony is ecstasy,' one read. The absurdity of it all reminds you why you are here. To suffer.

After building to a stable (7/10) exertion, we were given a breather for a couple of minutes. When came the big one. A sustained



VELOSTUDIO SUFFERFEST SESSION

PRICE: £10 for 60 minutes

CONTACT: visitleevalley.org.uk

20-minute FTP test that saw our efforts pushed into the red (8.5/10). When 10/10 is an all-out sprint, 8.5/10 for 20 minutes is total torture. We grunted on with raw lungs, bursting hearts and burning legs in the semi-darkness while constant House music banged away, providing the type of beat a slave rower on a Trojan warship would have recognised. By the time the music faded and the lights came up, our kit was drenched and our legs were shaking like a Jack Russell's in the rain. But, the suffering left us oddly satisfied in the way that only us cyclists really understand. So despite the odd graphics, and the bonkers music, we're definitely going back. 🚲 *Lee Valley VeloPark has launched a monthly VeloStudio membership scheme, with a £30 introductory offer for unlimited studio sessions, or £40 for unlimited studio sessions plus Pay & Ride on the road and mountain bike trails. See visitleevalley.org.uk for more info*



Pain turns to relief as the session ends



*ACCESSORY (NOUN):
SOMETHING THAT IS ~~NOT~~
ESSENTIAL; A ~~SECONDARY~~ THING.
VITAL*



Z20 PRO 65



PULSE CARBON



Zéfal

Instant self-tinting sunglasses

The forces of darkness (and light) defeated!

In 1996, the US military approached professors at Kent State University in Ohio and asked them to develop some eyewear that could adapt to light changes instantaneously. Seventeen years and \$40 million later (we swear we're not making this up) the boffins came up with a pair of instantaneous electronic tint-on-demand lenses. Great for fighter pilots, special-forces dudes and now cyclists – after raising \$575,563 on crowd-funding site Indiegogo, the finished product is due to be launched commercially this April and is being aimed squarely at endurance athletes.

The CTRL One sunnies can be operated manually or automatically and allow the wearer to control the amount of light that hits their eyes. You can also control the fit to a certain degree with both the sides and the noseband adjustable so that the eyewear will fit flush to your face. The frames and the colour of the lens can also be changed to suit your individual tastes.

The makers have roped in 2010 Tour de France winner Andy Schleck to help promote the product, hence the pic of



CTRL ONE SUNGLASSES

PRICE: £TBC

CONTACT: ctrl-eyewear.com

him modelling the eyewear here, and you can watch his verdict on how good they are on their website – complete with Arnie Schwarzenegger-type accent and gratuitous swearing.

The glasses, which come with a charging cable, strap and case are expected to cost around £200, although if you want prescription lenses these will need to be made to order at extra cost by your own optician. Visit ctrl-eyewear.com for more details and to place your order.



CYCKIT AEROCLAMP P1

PRICE: £23

CONTACT: cyckit.com



MEET THE WORLD'S FIRST 'ACCEPTABLE' SADDLE BAG

Kiwi man invents storage solution that won't offend!

Only in the image-obsessed world of cycling could the simple saddlebag be deemed a controversial object. For some, they don't merely upset the aesthetics of a bike's beauty so much as insult it. But then there's the school of thought that, hey, saddlebags are, you know, handy. You can put stuff in them, stuff that you'd otherwise risk splitting the pockets of your equally lovely and expensive cycling top. In an attempt to resolve this endless argument, Kiwi cycling nut Pat Reardon has come up with what you can see in this here photo – the Cyckit Aeroclam.

This hard plastic, water-tight case bolts onto your saddle rails, but unlike other bolt-on bags, where you have to fix a mount to the saddle, the Aeroclam's mount is incorporated into the bag itself.

The result is a really unobtrusive bit

of kit that will just about do the job. We say just about because when it comes to the inside of the Aeroclam things do get a little compact and bijoux. Thankfully, Mr Reardon provides helpful instructions on how to pack it correctly to fit a slim-line multitool, two (included) tyre levers, an inner tube, and a CO2 inflator. If you're worried the Aeroclam will spring open mid ride, don't be – not only is it secured by a tough-to-open rubberised latch, the Aeroclam also clips shut tight like – well – a clam and is fairly hard to prise apart.

There are two versions (the P1 and P2) which between them fit most saddle brands, without really disturbing the sleek lines of your bike. So ideal for all but the most fervent cycling fundamentalist. The Aeroclam is available from cyckit.com and costs around £23 plus p&p. 🚲



Greipel poses in his German champion's jersey. Can he add the rainbow stripes to his palmares?

"I COMPETE AGAINST MYSELF," INSISTS GREIPEL

What keeps the man they call the Gorilla motivated? Himself apparently

German sprint ace André Greipel is targetting the UCI Road World Championship as his main goal this year – despite the fact he'll be one of the older riders in the race. At 34, he's hardly ancient, but with the average age of those he'll be competing against around six years younger, what makes him think he can achieve one of the sport's greatest accolades so late in his career?

After all this is his 16th year as a pro. The answer seems to be in the mind, rather than the legs. 'Cycling is a character sport,' Griepel recently told reporters. 'You have to be committed to training well and living for your sport. I think I'm quite good at that.'

The ever-modest Lotto-Soudal rider also revealed that he doesn't put his incredible motivation down to a competitive desire to beat those around him. Instead, he claims, it comes from within. 'I always want to challenge myself, to fight against the inner self,

your limits,' he admitted. 'There's always someone who says you don't need to, but at the end of the day it makes a big difference if you challenge yourself and push yourself to higher limits.'

The point is echoed by top US Sports psychologist Robert MacDonald. 'Self-imposed limitations are tied to a person's self image,' says MacDonald. 'The lower the self image, the lower

'You have to live for your sport. I'm quite good at that'

the expectations. Until the person believes he is capable of more, he'll continually underperform.'

This year's World Championships are in Dubai, and the flat road race course will suit Greipel. The event may not be until October, but the big German is already studying everything from the parcours down to the likely weather conditions. With that level of preparation and self-belief, you could do worse than putting a few quid on the Gorilla wearing the rainbow jersey come the end of the year.

27.7

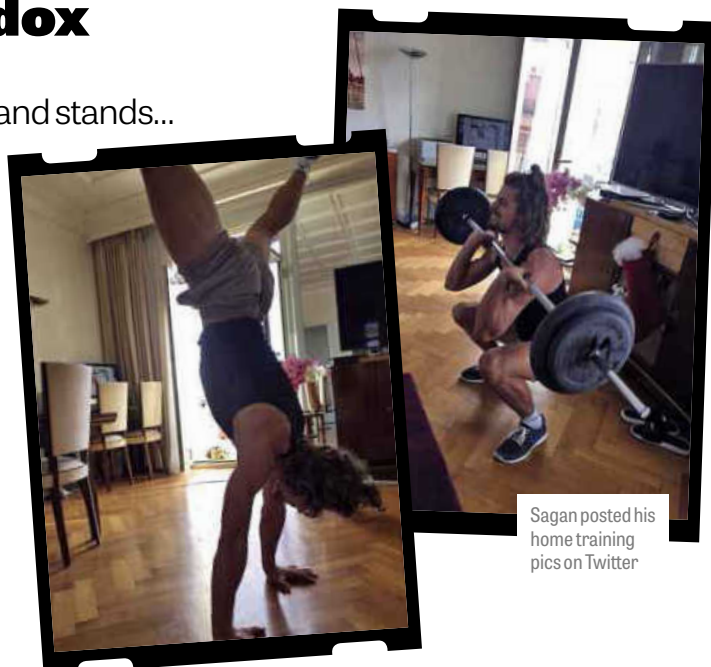
Average age of the riders on this season's World Tour teams, with Lampre-Merida having the youngest average age of 25.6 years and Trek-Segafredo the oldest, with an average age of 29.5 years.

Sagan reveals unorthodox training techniques

World cycling champ pumps iron, performs hand stands...

Ah, the world would truly be a less interesting place without Peter Sagan and his splendid award-winning Twitter Feed (Sagan won *BikesEtc's* coveted Tweeter of the Year Award 2015). It's often filled with very daft things, but occasionally it's filled with daft things that give us clues to his cycling brilliance. Take these two pics that appeared on his feed in January. One shows the cycling superstar performing a pretty impressive handstand, while the other shows him attempting an overhead lift

with a hefty-looking barbell. Under both pics Sagan has written, 'a bit of training, my hands are equally important.' As a road cyclist, you might think your legs are all that matter but Sagan's not kidding. The Slovak raced mountain bikes in his youth – a sport that develops a good deal of strength in your arms, wrists and hands. As a pro road cyclist, a lot of Sagan's success has been put down to his superb handling skills. Do we see a connection? We think we do. Right, we're off to do some handstands. 🚲



Sagan posted his home training pics on Twitter

Photography: Alamy

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ADVENTURE BIKES AHoy!

Three bikes designed to transport you anywhere for maximum fun, taken for a grin-inducing spin on the tarmac, trails and bridlepaths of Rutland

WORDS **MATT PAGE** PHOTOGRAPHY **ANTHONY PEASE**

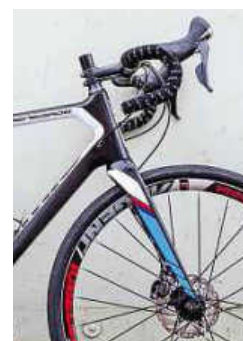
ON TEST



**GENESIS
DATUM 30**
£3,200



**MARIN
GESTALT 3**
£1,750



**JAMIS
RENEGADE
ELITE £2,249**





It's all about fun for this month's test ride. We know that road cycling at this time of year can be a bit grim, so we looked for three bikes designed to put a smile on our faces, and a route to match.

The Genesis Datum is a road bike – just one that's designed to thrive on the notoriously poor road surfaces of the UK. The range-topping Datum 30 comes with Di2 and hydraulic brakes.

New for 2016, the Gestalt comes from California-based Marin, a company better known for its MTBs. With its alloy frame and 1x11 groupset, Marin classes this as a 'beyond road'

bike, one that's designed to let you off the leash and explore. At £1,750, it's a little over half the price of the Genesis, so potentially a great-value option.

Jamis may not be well-known in the UK but maybe the Renegade will change that. Like the Genesis, it's another full carbon bike, but in some ways the opposite of the Genesis – an off-road bike that's designed to perform on the road too.

To find out what they're capable of, we took all three for a day out in Rutland, on a route that mixed rolling roads, dirt tracks and even a few sections of bridlepath. Bring it on!



A few last-minute roadside checks, and then we're off...

These bikes don't force you to stay on smooth tarmac



A true British Classic

Britain doesn't have a rich history of road racing compared to our continental neighbours. In Belgium, France and the Netherlands, the big one-day Classic races, some of which have been going for over 100 years, attract vast crowds, drawn by the promise of aggressive racing in brutally tough conditions.

These often feature rough roads and cobbles, the most famous of them being the Tour of Flanders and Paris-Roubaix. We may not have anything to match them in Britain,

but one home-grown race stands above all others when it comes to tough and rough road racing: the International CiCLE Classic, held around Rutland every April. With several rough and muddy road sections, it's a tough race and one that many riders struggle even to finish. If you fancy trying some of the notorious hills of the Tour of Flanders, see our Classic Climbs feature on page 124. And for a taste of what the CiCLE Classic is all about, read our report on page 120.



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GENESIS Datum 30

£3,200

Carbon fibre all-rounder from renowned British company

Of the three bikes on test, the Genesis is the one that looks most like a traditional road bike at a first glance. Not that you'll be giving it only the one glance. The frame is stunning in the flesh, with a pearlescent finish and a geometric pattern on the inside of the fork that oozes style. Tyre clearance is generous front and back, even with 30mm Challenge Strada Bianca tyres fitted. We ran them at 60psi, helping the bike float across the roughest of surfaces without being bucked around.

The frame comes complete with three bottle cage mounts, making it perfect for anyone looking to take on ultra-long adventures. And with mounts for mudguards, too, it's a really versatile frame – exactly why it did so well in the TransContinental race last summer, an insane self-supported race across Europe.

With a slightly slacker head angle and longer wheelbase than a race bike, it creates a very stable ride and one that is comfortable and rewarding to push on the downhills. It climbs well too, with a reasonably low front end for this style of bike, which makes a difference when pushing on steeper climbs out of the saddle.

The Ultegra Di2 hydraulic groupset is a joy, with a lever shape that is extremely comfortable in all positions and when paired with the latest Shimano RS805 flat-mount brakes, it's a package that's hard to beat.

The remainder of the components are all solid performers, although it's perhaps a little disappointing to see own-brand finishing kit on a bike at this price. The Genesis components are fine, just a little unexciting. We found the bar tape a little on the thin side, but with large tyres and frame and fork that absorb the vibrations well, whether you prefer thicker tape is down to personal preference rather than necessary for comfort.

The Fulcrum Racing Sport wheels are the only real weak link in the package as they're fairly heavy and flexed when climbing and sprinting, something that noticeable when riding back to back with the Jamis, with its excellent wheelset. Overall, though, the Datum is a bike that definitely fulfils the brief of being fun to ride.

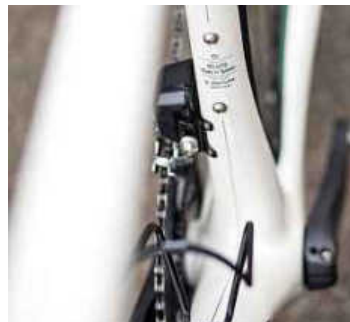


With its pearlescent finish and geometric patterns, the Datum is a real eyecatcher



GOOD

- **Versatile** – Ready for anything, with mounts for three bottle cages, mudguards and racks.
- **Looks** – Stunning paintjob and tidy cable routing
- **Disc drivetrain** – Hard to fault and a great match for the bike



NOT SO GOOD


- **Wheels** – Slightly heavy and flexy, impacting the overall ride
- **Finishing kit** – The own-brand kit is slightly disappointing at this price
- **Bar tape** – Some will prefer thicker bar tape



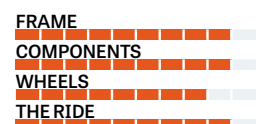
PRICE: £3,200
WEIGHT: 8.94kg (size M)
FRAME: Monocoque carbon, full carbon fork
GROUPSET: Shimano Ultegra Di2 6870
BRAKES: Shimano RS805
CHAINSET: Shimano Ultegra 6800, 50/34
CASSETTE: Shimano 105, 11-32
BARS: Genesis RandoX Flared
STEM: Genesis Road
SADDLE: Genesis Road Race
SEATPOST: Genesis
WHEELS: Fulcrum Racing Sport Disc
TYRES: Challenge Strada Bianchi, 30c
CONTACT: genesishbikes.co.uk



CONCLUSION

The Genesis Datum is designed to take you wherever you want to go, no matter how far or wild that might be, and it certainly has the comfort and ability to tackle ambitious rides. A stunning frame to look at and ride, it will suit many people looking for a sleek, fast but tough and versatile road bike. 

Rating



OVERALL
8.7
 10

MARIN Gestalt 3

£1,750

Alternative choice from the brand synonymous with mountain bikes

Marin has a rich history in all things off-road and that experience shines through in the Gestalt. Single-chainring bikes with wide-ratio cassettes have quickly become the norm in mountain biking, but on the road they're still a rare sight – though that will probably change over the next few years.

We were skeptical about whether or not it would cover us for all roads, but in truth, we were never found wanting, being covered both for 20% climbs and the faster road sections, too. Having one shifter not only makes things simpler and neater but is also easier to maintain and potentially lighter. Weight, however, is not the Gestalt's strongest point, being heavier than the others by some margin, though it does have a feeling of solidity about it.

It surprised us with a comfortable ride, the skinny alloy seatstays copying what manufacturers have been doing with carbon for several years to improve rear-end compliance.

The SRAM DoubleTap shifter takes a little getting used to if you're more familiar with Shimano. It can be a little clunky in use, especially with the gaps between ratios in the Rival 1 set-up. The brakes, however, are superb, with excellent feel and power – just as good, if not better than the Shimano equivalent. Marin has included a unique alloy cooling fin on the fork, something we haven't seen on a road bike before. The Marin badge used as a seatstay bridge is a neat touch, as is the clean internal cable routing.

The wheels are far from the lightest, but they do give a solid ride and the Naild quick-release bolt-thru axle is genius, meaning just a quarter-turn is all that's needed to remove it. We're convinced this is the type of system that will become the choice of pro teams who require fast wheel changes when disc brakes become the norm over the next few years.

The Marin is a joy to ride, a decent climber and confident descender with excellent comfort helped by the 30mm Schwalbe G-One tyres. The handlebars are comfortable in all positions, with the flared drops making off-road a little easier and flat tops making for a great position for climbing or pushing over rougher roads.



The Gestalt's 1x11 drivetrain makes a virtue of simplicity



GOOD

- **Comfort** – The alloy frame's comfort surprised us
- **Brakes** – SRAM hydraulics deliver smooth braking
- **Bolt-thru axles** – The clever design means they're simple, quick and easy to use



NOT SO GOOD

- **Weight** – Although this is forgivable at the price
- **SRAM Rival levers** – Not as comfortable as Shimano
- **Clunky shifting** – If 1x11 has a downside, it's the big ratio gaps that make the shifting clunkier



PRICE: £1,750

WEIGHT: 9.57kg (size 54)

FRAME: Marin Series 4 6061/6066 Aluminium

FORK: Nail Navlt Carbon

GROUPSET: SRAM Rival 1

BRAKES: SRAM Rival Hydraulic

CHAINSET: SRAM Rival 1, 42t

CASSETTE: SRAM XG-1150, 10-42

BAR: Marin Compact

STEM: Marin 3D forged alloy

SADDLE: Marin Endurance Concept Elite

SEATPOST: Marin Carbon

WHEELS: Maddux FR300/Formula Hubs

TYRES: Schwalbe G-One, 30c

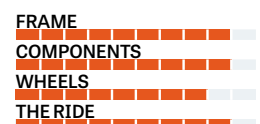
CONTACT: marinbikes.com



CONCLUSION

Some riders will love the simplicity of the 1x11 drivetrain and at no point during our testing did we really feel we needed extra gears at either end, although there are a few big jumps in ratios. The Gestalt proved to be an immensely fun bike to ride with some neat touches that help it stand out. 🚴

Rating



OVERALL
8.9
10

JAMIS Renegade Elite

£2,249

American-built all-road bike that aims to do more than just grind on gravel

At first glance, the Jamis Renegade might look a little confused. Semi-deep 30mm wheel rims and the sleek carbon frame scream 'road bike' but they're matched with big 35mm knobby tyres and disc brakes. Launched last year, it was developed in the USA as a gravel racer, designed to be light, fast and capable of riding rougher roads without sacrificing speed.

Those 35mm-wide Clement X-Plor tyres are a standout feature – they're not a model we see very often, but they seem to do a great job of balancing the need for fast, smooth riding on roads while also providing enough grip to handle off-road riding. Tyre pressure is crucial, but we found around 60psi perfect for a mixture of riding. If you were spending more time riding off-road, then a lower pressure would be beneficial, especially when run tubeless.

The biggest surprise was how the Renegade reacted to pedal inputs. Acceleration is instant, thanks to a laterally stiff frame and impressive wheels that feel more like road race bike than adventure bike. But this acceleration and stiffness don't come with any detrimental effects on comfort, with the fat tyres and low-mounted skinny seatstays giving the most comfortable ride of our trio.

The Shimano Ultegra groupset, seen here in its mechanical iteration with no shortcuts taken, is faultless, and the 11-32 cassette provides a good choice of gear ratios.

Ritchey finishing kit is always nice to see, although the single-rail Vector Evo saddle clamp is a rare sight. While it has advantages, in particular increased comfort, it does mean that should you wish to change saddles you will either be restricted to a few models, or have to buy an adapter to take standard rails. The shallow-drop bars and tight curve will appeal to racers and give a traditional race bike look, but not everyone will be comfortable in the drops, especially those with smaller hands.

Downhill on roads was another big surprise, with a confidence-inspiring position but without the slow, ponderous handling that can often occur with slacker adventure bikes.



Semi-aero wheels and fat tyres are an adventure-ready combination



GOOD

- **Speed** Instant acceleration and so much fun to ride.
- **Wheels** Light, stiff, fast and tubeless-ready – almost perfect.
- **Comfort** Big tyres help, but the frame & fork deliver a fantastically comfortable ride.



NOT SO GOOD

- **Cable routing** Not the neatest routing at the front.
- **Handlebar shape** Not the most comfortable in the drops.
- **Saddle clamp** The single rail design has its benefits but limits saddle choice.



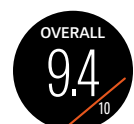
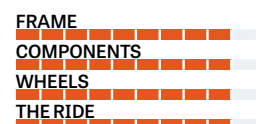
PRICE: £2,249
WEIGHT: 8.93kg (size 56)
FRAME: Jamis Omniad M30 Carbon monocoque
GROUPSET: Shimano Ultegra 6800
BRAKES: Shimano R785
CHAINSET: Shimano Ultegra 6800, 50/34
CASSETTE: Shimano 11-speed, 11-32
BARS: Ritchey Evomax Comp
STEM: Ritchey Comp 4-axis
SADDLE: Ritchey Comp Zero max Vector EVO
SEATPOST: Ritchey WCS Link Flexlogic carbon
WHEELS: American Classic Argent Tubeless disc
TYRES: Clement X-Plor USH, 35c
CONTACT: evanscycles.com



CONCLUSION

The Jamis wowed all three of our testers. For a bike designed primarily for going off-road, we were surprised that it impressed us on the road just as much. It accelerates quickly, proved to be very comfortable and flies up and downhills. Unless you're after a pure race bike, it ticks all the boxes. 🚲

Rating





Jamis Renegade Elite

Fast, light and fun on any terrain, the Renegade grinds its way to victory



Each of the three bikes we took to Rutland offers a slightly different take on the adventure bike genre. We loved riding the Marin Gestalt 3 and it challenged our early preconceptions. The 1x11 drivetrain, with its huge cassette, gives all the gears that most people will ever need. It was capable off the beaten track and well mannered on the road. While the heaviest bike on test, it's also the cheapest and a great option at the price.

The Genesis Datum 30 is the most like a traditional road bike, but bigger tyres and clearance mean it's not only more capable off-road, but better able to deal with poorer road surfaces. It may be almost £1,000 more than the Jamis, but for that you get the fantastic Ultegra Di2 hydraulic groupset.

The Jamis Renegade, despite being a brand that most will not have heard of, won us over with its mix of speed and comfort. Everything about it seems perfectly judged, from a great component selection to a magical frame and fork that seemed to suit riding normal roads just as well as the off-road sections. Though not a featherweight by road bike standards, it's the lightest on test and has the lightest wheel package by some margin. When you factor in the price, it adds up to a bike that all our testers loved and a deserving winner of the coveted *BikesEtc* Gold award. 🚲

GENESIS DATUM 30 £3,200



FRAME
COMPONENTS
WHEELS
THE RIDE

OVERALL
8.7
10

MARIN GESTALT 3 £1,750



FRAME
COMPONENTS
WHEELS
THE RIDE

OVERALL
8.9
10

JAMIS RENEGADE ELITE £2,249



FRAME
COMPONENTS
WHEELS
THE RIDE

OVERALL
9.4
10

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GRAEME OBREE

'DO IT BECAUSE YOU LOVE IT'

An improbable champion, Obree battled the UCI, lack of funds and his own nature to claim a string of titles. Returning for one last record attempt, we speak to him about a life lived in search of something more

WORDS **JOSEPH DELVES**



Imagine the fastest cyclist in the world, the world champion, the holder of the Hour record. Where do they come from, how did they become what they are, what did they have to sacrifice, what do they look like? The person you're imagining is not Graeme Obree.

Born in 1965 in Warwickshire, to Scottish parents, Obree moved north of the border as a child and has always considered himself Scottish. The son of a police officer, it wasn't easy growing up as in a small town, and his early life was marked by bullying, debilitating depression and social anxiety. From a young age, riding bikes with his brother offered an escape from his troubles, and after entering his first 10-mile race he soon established himself as a successful amateur time-triallist. Throughout the early 90s, he rivalled the English champion Chris Boardman. However, unlike the better-funded Boardman, he struggled to make ends meet ➔



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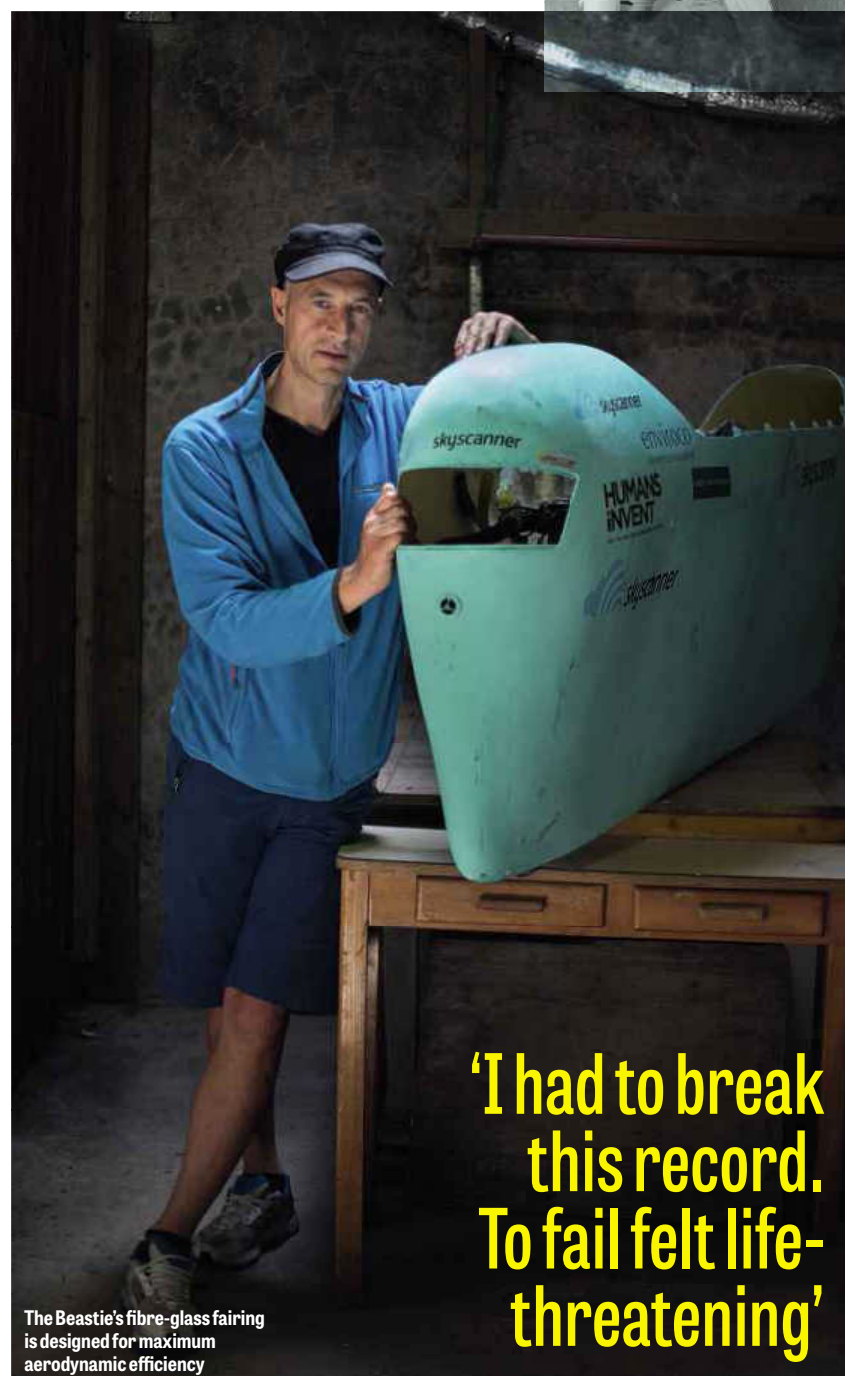
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through racing alone and in 1992, when the bicycle shop he owned went bust, he found himself in debt, on the dole and needing to support a young child.

With the employment office trying to push him into a career in computing or secretarial work, he decided to throw everything at claiming one of the greatest feats in cycling: the Hour record, held by the Italian Francesco Moser since 1984. With the support of his wife Anne, he came up with a plan. He would design a bike and attempt the record within eight months, just before his rival Boardman was due to take a shot. The gangly steel bike he built from odds and ends, including high-speed bearings from a washing machine, was revolutionary. Its radical 'tucked' position greatly reduced drag, allowing Obree to slip through the air at incredible speed.

Although confident in the bike and his abilities, unknown to the outside world, Obree continued to suffer from severe depression. As such his



motivation to claim the Hour came from a far darker place than the usual sources of athletic inspiration. 'It progressed from a position of discontentment,' Obree reveals. 'I needed more and more fulfilment from the outside. Having performed at a British level, I wanted to go further. I wanted to be at the highest level possible and you have to convince yourself that you will make yourself that good. I wasn't content not to. Beating Moser's record seemed the only way I could find a degree of contentment, or so I thought at the time. That record meant so much to me, my entire sense of self-worth became tied up with it.'

Becoming a world-beater

With no indoor tracks in the UK, the attempt would take place at the Vikingskipet velodrome in Norway on 16th July 1993. With the keen eyes of the press watching, Obree started strongly but as the laps rolled round it became clear he was struggling. He was unable to bridge the gap, and when the 60 minutes were up, he was nearly a kilometre short.

'As I walked off that track, the weight of the failure I felt was staggering,' says Obree. 'It was such a superhuman effort and I'd fallen a few hundred metres short. I couldn't get that back. As I walked towards the cameras, people were congratulating me and trying to hand me flowers. But I didn't want them. I felt this leaden mass of failure, worse than any pain you can imagine. Basically, emotionally to survive as a human being... I just thought no, I've got to go again.'

With the timekeepers from the UCI booked on flights home the next day, it was agreed that Obree could go a second time provided he began by gam. The effort required to attempt the hour is immense. Eddy Merckx, widely regarded as the greatest cyclist in history, said he couldn't walk for four days after he tried. Obree would have less than 24 hours to recover before his next shot.

'That walk from the track, feeling that way, that's the point I became a proper world-beating athlete,' Obree says. 'I felt as if I was accessing this life-saving energy, because I had to break this record. To fail felt life-threatening. Emotionally, attempting the Hour and falling just short was like trying to jump the Grand Canyon and coming up a metre short. That last metre really matters, and that's how much that half-lap mattered to me. I was either going to beat ➔

the record or die. I wasn't going to give up. I'd pedal at the necessary rate come hell or high water. What changed at the deepest level was the *will* in me.'

Waking throughout the night to stretch his depleted muscles, Obree arrives at the velodrome five minutes before the scheduled start time. He barely makes eye contact with anyone. He sets off at 9am exactly. One hour and 51.596 kilometres later, he's broken Moser's nine-year-old record.

'I felt as if I broke the Hour by running into a burning building a lap at a time,' he reveals. Celebrations break out in the velodrome. However, while initially relieved, Obree experiences little catharsis from his achievement. Instead, in its place is the feeling that he's survived a near catastrophe.

'I was so emotionally drained when I finished, I just felt, thank goodness that's done. I had my back against the wall. I was like a kitten that had fought off a pack of foxes. I could only think, I've survived. It very quickly became a case of, well, that kept me going for so long but what now?'

Within a week Boardman would take the title from Obree on a carbon-fibre bike designed by sports car-manufacturer Lotus that had cost several hundreds of thousands of pounds to develop.

The Flying Scotsman

While short-lived, Obree's brief custody of the record left him solvent, and with serious offers of sponsorship for the first time. The next few years would be a whirlwind of achievement. In September 1993, he saw off Boardman in the individual pursuit to win gold at the World Track Championships, setting a new world record in the process. The following year, he regained his Hour title before once again winning at the World Championships in 1995. However, despite these achievements, success didn't bring him unqualified happiness. The stress of public scrutiny and run-ins with the UCI over his innovative bicycle designs led to bouts of drinking and depression, even while he was riding at a world-beating level. The death of his brother in a car crash in 1994 only exacerbated his depression.

His short lived pro-career with French outfit Le Groupement started badly when the Gallic riders gave him the cold shoulder, and came to an end when he made it clear that he wouldn't co-operate with the team's programme of 'medical backup'. Despite retaining prodigious form over the following years, a lack of support and ongoing mental health problems, including suicide attempts and spells in institutions, led to Obree disappearing from the world stage.

Thirteen years of therapy followed, resulting in an eventual diagnosis of bipolar disorder. In 2003, Obree released his unflinching autobiography *Flying Scotsman*, which later became the basis for a film starring Jonny Lee Miller. Despite a lower profile throughout this period, cycling remained a constant



Obree poses with *The Beastie*, ahead of his attempt on the human-powered speed record



Unfettered by UCI rules, Obree chose a prone riding position for smaller frontal area

OBREE TIMELINE

11 SEPTEMBER 1965

Born in Nuneaton to Scottish parents the young Obree moves to Kilmarnock when his police officer father receives a posting there. His formative years are marred by severe bullying and bouts of depression.

17 JULY 1993

Breaks Francesco Moser's nine-year-old Hour record on his second attempt, less than 24 hours after falling nearly a kilometre short on his first try.

23 JULY 1993

Within a week Chris Boardman takes the record from him. Given how he suffered in his first failed attempt, Obree professes to feel only relief for his rival.

Obree races towards the Hour record on his home-built bike in 1993



in Obree's life. While the film was well received, it didn't make enough at the box office to significantly alter his financial situation and he struggled with the attention it brought. Coming out as gay after years of denial then led to a period of self-enforced seclusion. When he went public in 2011, the news made the front page of *The Scottish Sun*.

Living reclusively in a council flat in Saltcoats on Scotland's wild western coast, it was towards the end of this process of intense introspection that he finally allowed himself to reflect positively upon his own achievements for the first time.

'It wasn't until 2008 that I came to appreciate what I'd done,' Obree tells *BikesEtc*. 'I was watching Nicole Cooke at the Olympics, and I know her and know she'd never dope. When she won, I felt so happy. I had tears in my eyes. Years ago, people would come up and congratulate me on having broken the Hour record but I never got that feeling. But at that moment I thought, is that how people felt about me? That was the start of me appreciating that yes, I did an amazing thing.'

Around this time Obree also began a new stage in his career, working as a public speaker, giving motivational talks to young adults.

'I'd been speaking in schools, and the kids were really enthused by this mad story about a man who built a bike out of bits of washing machine,' laughs Obree. 'But these kids weren't even born in 1993 when I broke the record. I wanted to have something current. I wanted to show them that there's still space for individuality.'

Well aware of his tendency towards obsessive and destructive behaviour, Obree nevertheless believed himself to be in a good enough place to attempt a fresh challenge. The human-powered vehicle (HPV) land-speed record is a niche pursuit by any standard – men and women building Heath Robinson-style contraptions in order to propel themselves forward as fast as possible under their own steam. But for Obree's keen, problem-solving mind, the challenge was a perfect match.

'It's one of the rawest forms of human endeavour,' says Obree. 'There are no limiting factors. It's a ➤

'I felt so emotionally drained, like a kitten that's fought off pack of foxes'

SEPTEMBER 1993

Obree defeats Boardman at the UCI Track World Championships on the way to securing a gold medal.

APRIL 1994

With the UCI poised to ban his revolutionary riding position Obree takes a final shot at the Hour, pushing the distance to 52.713km before the UCI strike off his result.

JANUARY 1995

A contract with French team Le Groupement lasts a single day before Obree is sacked for 'unprofessional conduct' although he suspects refusing to accept the team's 'medical backup' is the real reason.

SEPTEMBER 1995

Obree comes to the UCI Track World Championships with a new position, dubbed The Superman. He takes a second rainbow jersey. Numerous records will be established using the technique over the following years.

pure test of ability. There are no stuffed blazers from the UCI involved, no one telling you what you can and can't do. I thought, here's the thing for me.'

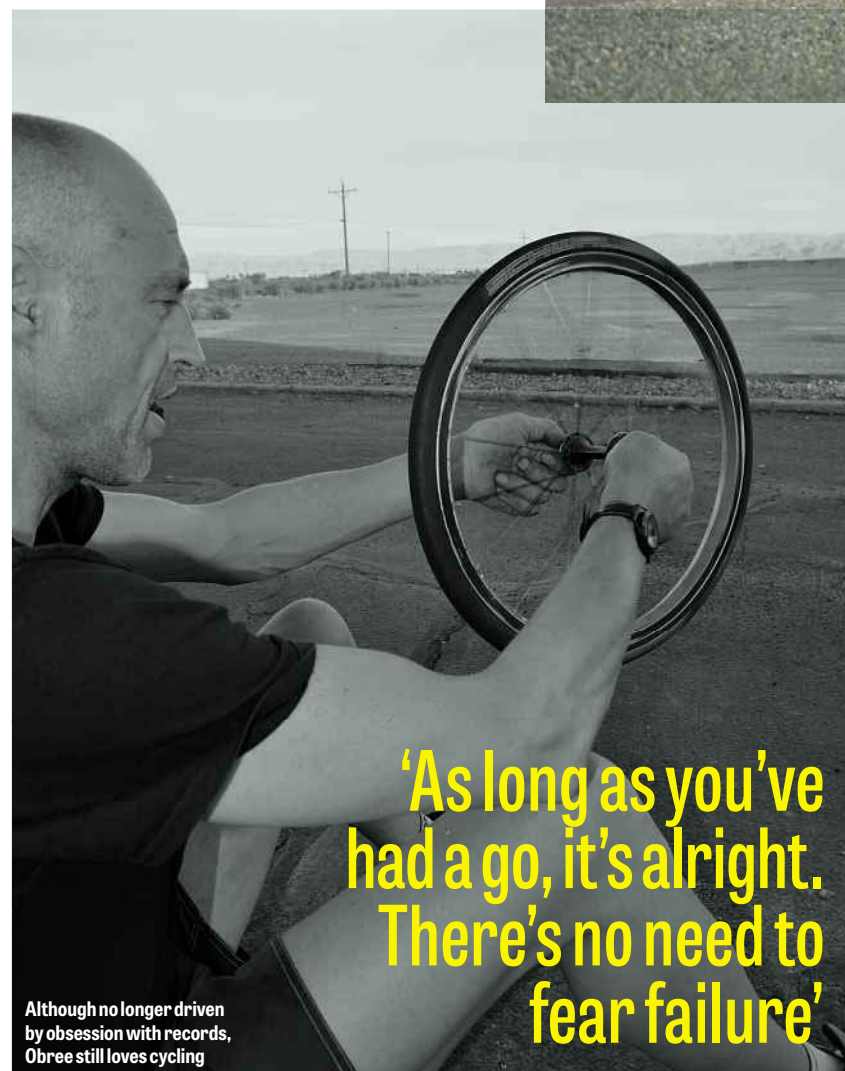
In typical Obree fashion, the attempt would be undertaken with a minimum of funding.

'I wanted it to be a real one-man endeavour, to show that you can still do something on your own. You don't need to wait for a corporation to come along, or to ask, "Please can I be part of this?" You don't need to be a tiny cog in a huge machine.'

Using a prone position, with the rider's head foremost for the smallest frontal area, Obree aimed to break 100mph. The machine he created, nicknamed The Beastie by his friend Sir Chris Hoy, was shipped out to Battle Mountain in Nevada, USA, along with a film crew to document the attempt. Obree turned himself inside out while training, and



The Beastie in action on Battle Mountain in Nevada



'As long as you've had a go, it's alright. There's no need to fear failure'

Although no longer driven by obsession with records, Obree still loves cycling

needed emergency vascular surgery. While this seeming return to compulsive behaviour worried his friends, Obree was more pragmatic.

'Not getting the human-powered vehicle record wasn't going to be so bad because it wasn't a case of my whole self-worth being tied up in getting it, as it had been for the Hour,' he explains.


Living without fear

Although The Beastie did establish a new record for prone vehicles, problems with the narrow machine's handling meant it fell well short of 100mph. In contrast to his younger self, Obree was philosophical about having to revise his expectations downwards.

'If you fall short, which I did, as long as you've had a proper, doing-your-best, honest go, it's alright. There's no need to be impeded by fear of failure.'

Obree is adamant that his days chasing records are behind him. Instead he's working on a book about his experiences with depression called *Enough*. While no longer hungering after the validation he found in pushing himself to physical extremes, cycling remains central to his life. Most days he's still to be found out riding in the hills around his home.

'Cycling is escapism. Now I can just go out and ride a bike. I still like to go hard, I still like to feel my lungs burning, but that's just because of how I feel right now, not because of some potential future achievement. There's no element of "futurism". When I'm cycling now, I'm in the present. I'm not doing it to perform later on but because it's where I want to be right now. I'm not going after any more records. Now if I'm seeking external gratification, it means there's something wrong with the here and now.'

Having spent his life pushing himself beyond the limits of human endurance, motivated by forces he has at times struggled to comprehend, Obree finally seems to have found a degree of contentment. His achievements are incredible enough viewed in isolation, even without knowledge of the adversity he faced in accomplishing them. When asked what motivates him to continue pushing onwards, he replies that there are only three reasons to do anything: 'Because you need to, because you want to, or because you feel you ought to. Never do something just because you ought to. Whether it's going out on the bike, entering a race or attending a funeral, do it because you want to. Do it because you love it!'  *Battle Mountain: Graeme Obree's Story* is in cinemas from 1st April. More info at gobattlemountain.com

JULY 1996

With his mental health unravelling, Obree's sole Olympic campaign ends in the preliminary rounds.

FEBRUARY 2011

Announces he's gay in an interview with *The Scottish Sun*.

SEPTEMBER 2013

Travels to Nevada in an attempt to set a new human-powered vehicle record, but falls short, instead setting a record for a prone-style vehicle of 53.3mph.



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HOW TECH CAN MAKE YOU FASTER...

Like a spoilt Millennial child, here at *BikesEtc* we're suckers for a bit of tech. From making indoor training fly by to recording our power output that one per cent more accurately, we look at all the bits and bobs out there that can make you a better and faster rider

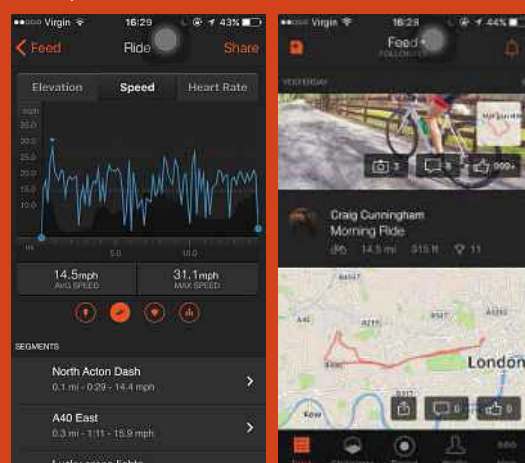
WORDS **CRAIG CUNNINGHAM**

TECH YOU KNOW



STRAVA

■ After its initial release in 2009, the exercise-tracking app has gone from just an app to a cycling way of life. The simple idea of curating 'segments' compels us mere cycling mortals to battle it out like the gods of the pro peloton. So much so that last year saw over 115 million rides uploaded worldwide, including 23 million rides uploaded in the UK alone. On Sunday 7th June, the world's busiest Strava day last year, 4.1 billion kilometres were logged, which comes up just short of a visit to Uranus and back again. With pros and amateurs both utilising the app, Strava has bridged the gap between fans and their idols, much like Twitter did back in 2006, swapping your Lily Allens for your Alex Dowsetts. Sharing their performance inspires many riders to push themselves. As American journalist Tom Vanderbilt once said, 'Strava may be a home for repressed Walter Mittys clad in the yellow jersey of the mind, but it can also unlock a kind of inner frontier of exploration.' Here we can show you how...



HOW DOES IT WORK?

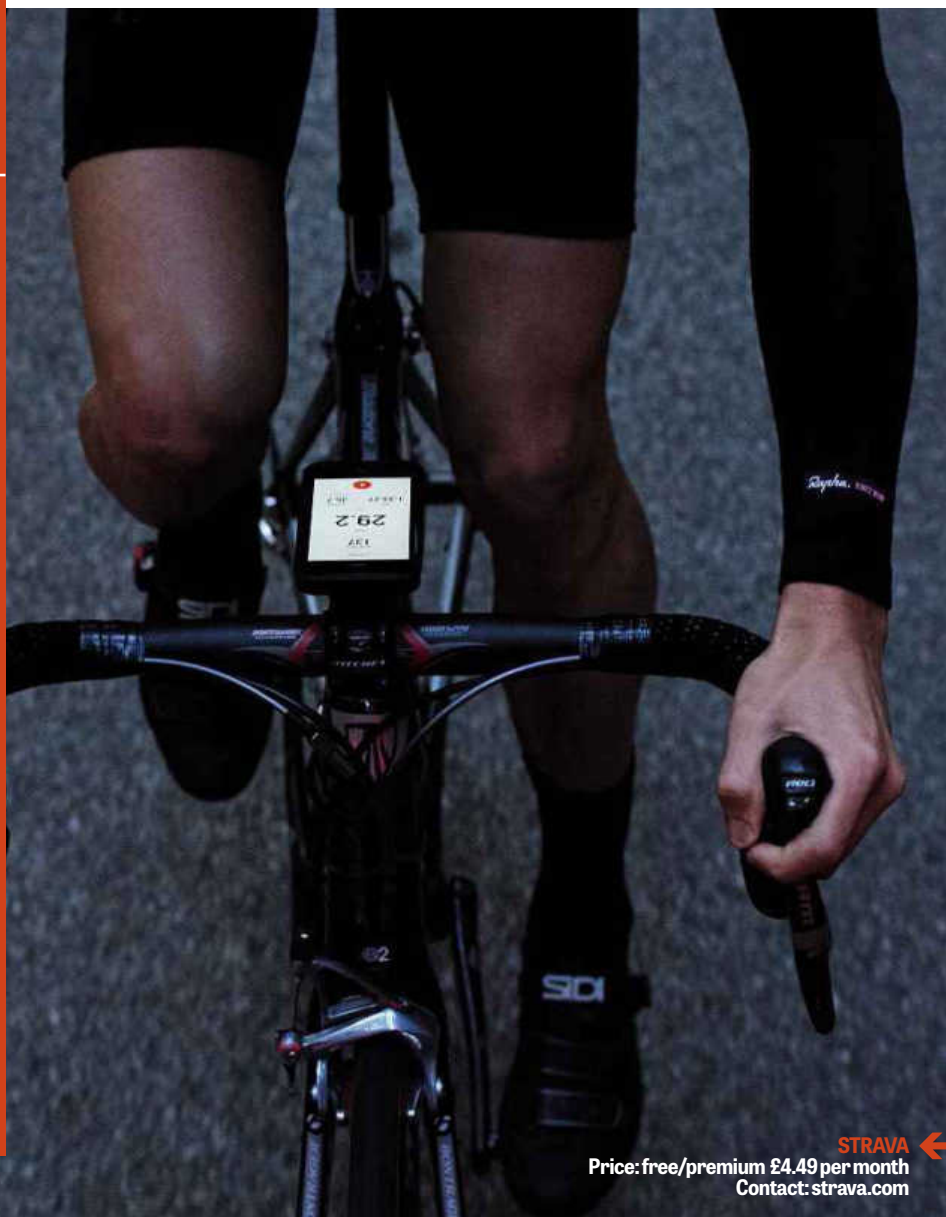
■ Pushing aside the primeval urges of beating fellow cyclists towards that sweet KOM, Strava has a whole host of other features that can help you increase your speed.




MONTHLY CHALLENGES

■ By shifting the idea of training rides from the realm of monotonous mile-munching to competitive badge collecting, the regular challenges issued by Strava act like a call from the cycling gods. Initially, Strava incentivised these rides with loot you could purchase once you'd completed a challenge, usually in the shape of a one-off jersey. They've recently binned that idea in favour of virtual roundels which appear on your profile – which is a cheaper option for us and no less desirable in its own way.

■ The social-facilitation of the app and its challenges were dreamt up by Strava's co-founder Michael Horvath who wanted to recreate his youthful days as a rower. 'When you leave a sport,' he revealed, 'you realise that so much of what made you excited about being an athlete was the motivation you got from your team-mates. You can't replicate that. It's hard to find eight guys to row with every day.' By digitally reproducing sport's camaraderie, Horvath's app can now push you to challenge yourself each month. And here's how...



STRAVA 
Price: free/premium £4.49 per month
Contact: strava.com

PREMIUM

TRAINING PLANS

■ Many enjoy Strava's free custodian duties, recording data and keeping archives, but there is a plethora of tools that can be used to help you drop those precious seconds. By escalating to Premium membership, Strava evolves from dry record book to fully integrated coaching programme. By incorporating Carmichael Training Systems, Strava Premium proposes a host of training plans. With 10 four-week programmes to choose from, you can work on pretty much anything from improving your endurance, and training your lactate threshold to improving Vo2max. All plans can be adjusted to your weekly time spent on the bike, so you can train from just five hours up to 12, either indoors or out.

LIVE SEGMENTS

■ One of the best ways to improve yourself is through the slight evolution of Strava's segments. Live segments. 'What's the blimmin' difference?' we hear you ask. Well, using newer GPS devices, like the Garmin Edge 520, you're prompted when a segment is coming up on a ride. Before you'd have to ride and hope you hit the segment at the right moment, then would review this once you were plumped in your favourite post-ride armchair. Now you can see exactly where the segment begins and ends as you're riding it. The technology tracks you against other riders and shows whether you're up or down on their time – a factor that'll prompt you to either push hard or push harder. Much like a time-trial minuteman, your Garmin can give you an update on how fast you're going, in conjunction with other wheelers. Seeing your progress in real time is a massive advantage – think of it as a Sir Alex Ferguson giving you the hairdryer treatment mid bike ride.

POWER METER ANALYSIS

■ Unlike Team Sky gaffer Sir Dave Brailsford, you don't have the time or resources to scour hours and hours of video footage and crunch numerous numbers. Such a task would require the patience of a saint and the dedication of a Shaolin monk, but with Strava's power-meter analysis you can cut right through all that. By implementing your power meter into your training, you can see how much power you've generated on the ride. With the help of Strava, you can log every effort and measure it against your functional threshold power (FTP).

ZWIFT

As you begrudgingly spin in your dank pain cave atop your turbo trainer, you may question what exactly you're doing. Enter Zwift. The US company opened its virtual doors last year, allowing people to take to the virtual streets and train outside from the comfort of their home. Co-founder Eric Min thought up the idea after having to stare at his basement wall for hours on end. Zwift went from strength to strength in 2015, even recreating the UCI Road World Championships course in Richmond, Virginia. With plans to construct places both new and familiar in 2016, virtual-reality wheelers have a lot to look forward to. 'It's just a game though, it won't make me faster,' we hear you shout, but bragging rights are a powerful thing. With weekly group rides and competitive crits, you'll be chomping at the bit to best your buddy's time. And don't let its soft graphics fool you, the calculations that go into making the game are as serious as the science that goes into making Froomey a Tour de France champ. 'I'm all about watts per kilo over time,' Jon Mayfield, Zwift's co-founder and 'game master' said recently. 'We want this to be fun and entertaining, but with legit training technology. We have a different virtual power than anyone. We use speed and acceleration, not just speed, as sprinting is important.'



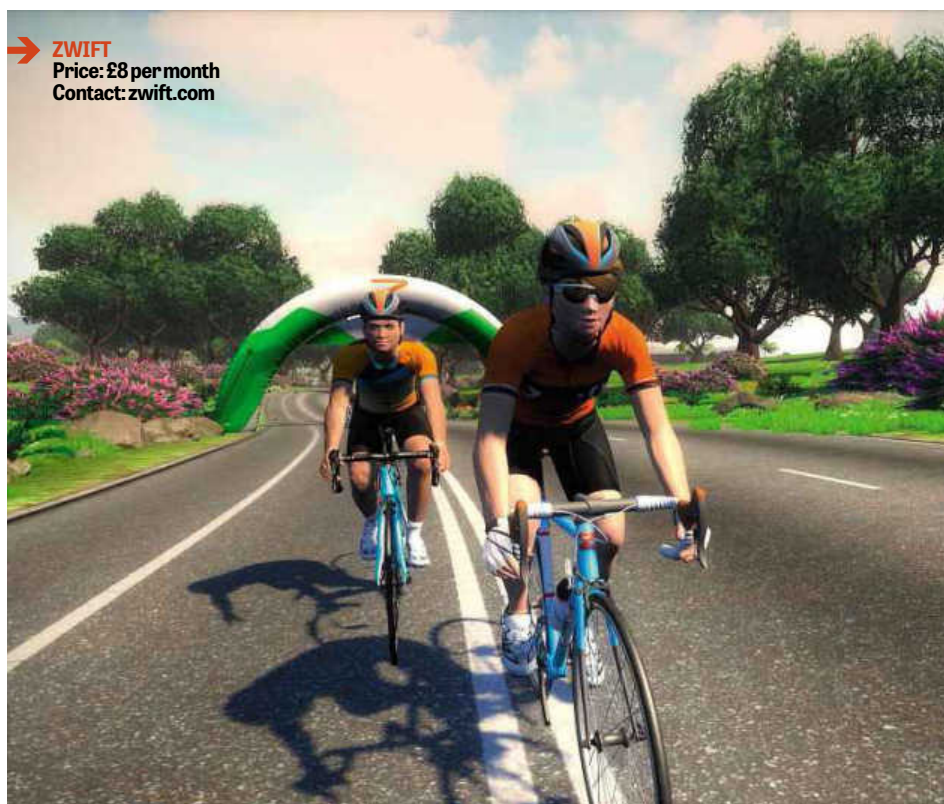
HOW DOES IT WORK?

If you use a turbo trainer, you'll be able to take part. The most basic set-up involves a trainer coupled with an ANT+ speed sensor and a PC, but if you're lucky enough to have a compatible smart trainer (such as the CycleOps Powerbeam Pro, £925, paligap.cc), Zwift will instruct the trainer to mimic the virtual gradient by adjusting the resistance level.

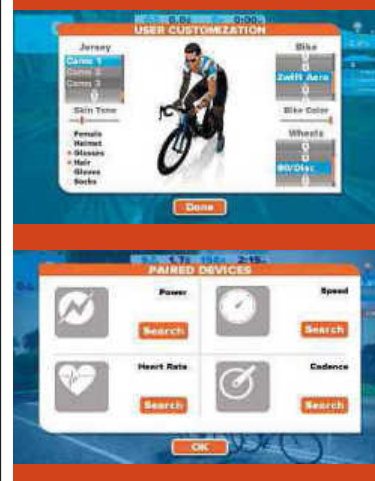
After an initial sign-up and gear set-up, you find yourself pitting your skills against fellow pain cave dwellers across the globe snatching KOM/QOMs and holding onto leader jerseys for as long as you can.



Zwift also has the capability to integrate your training regime into the software, with memos directing you accordingly. On top of all that, you might spot a pro or two, such as Jens Voigt and Ted King who frequent Zwift Island. Imagine pitting yourself against them!



→ **ZWIFT**
Price: £8 per month
Contact: zwift.com



TECH YOU KNOW

GARMIN
EDGE 520

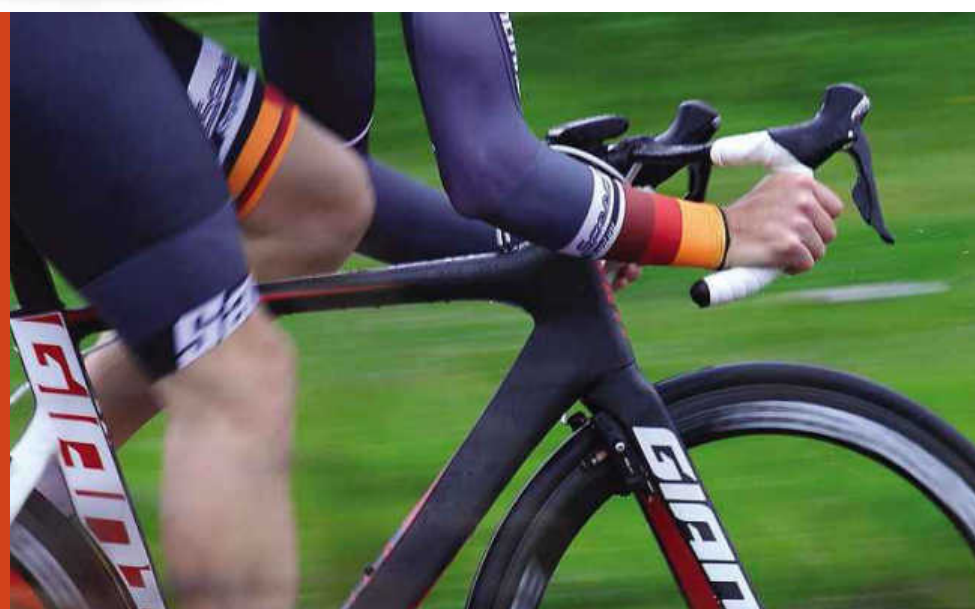
Garmin's cycling computers have dominated the GPS scene and with good reason. In July last year Garmin, revamped its beloved Edge 510 model, introducing a whole host of features including Strava Live Segments compatibility. That's just the tip of it, though...

GARMIN EDGE 520 ←
Price: £240
Contact: madison.co.uk

HOW DOES
IT WORK?

■ This little beauty is a really versatile piece of tech. Wear a heart rate monitor and it can analyse your warm-up and provide advice on what effort you should be aiming to accomplish on that ride – guidance that can really help you structure your rides.

■ Unlike the pros, we amateurs don't have a team of trainers following our every move but, if used right, the Garmin Edge 520 goes a long way to providing a similar level of assistance. When used in conjunction with a compatible heart-rate monitor, this small but powerful device can estimate your VO2max – basically the maximal amount of oxygen your



body can deliver to your muscles in a minute – through its analysis of your heart rate variation. Knowing your VO2max will help you effectively break down your training schedule into different zones of effort (see page 6 of the free Guide to Spring Training that accompanies this issue). Much like knowing your

functional threshold power, VO2max will dictate what training zones you will ride in and, by knowing this, you'll be really be able to work on your marginal gains.

■ Like a whole host of cycling computers, the Edge 520 can also analyse your cadence with the right sensors. Why is this good? Well, having a good

cadence is paramount to maintaining energy levels efficiently. A simple thing like increasing cadence can pay huge dividends for very little effort. By doing this you push a much lower force thanks to the gear combinations. If you can make a habit of it your body will use less oxygen and will thank you century after century.



POWER METERS

As the technology of pros trickles down to us regular folk, we have started to see the cost of power meters come down, too. Before power meters became a constant in the world of cycling analysis, old pros like Poulidor and De Vlaeminck would champion heart rate as the key to understanding their training better. So why are power meters so great? Unlike speed or heart rate, your power output is the purest measurement, mainly because it can't be affected by external matters. It sits at the basis of everything you do as a cyclist, it's the force you create to push the bike. Functional threshold power is the highest level of power you can hold for a set time. Your power output can be measured in a few different ways and, depending on how much cash you want to splash, here are a few different options.

➔ **GARMIN VECTOR 2 KE0**
Price: £1,200
Contact: madison.co.uk



GARMIN VECTOR

The simplest, easiest and lightest of the whole bunch award goes to Garmin. Its Vector pedal power meters weigh only 426g and can easily be taken off one bike and put on another. By measuring power output where it originally exits the body, the Vector can measure the output more accurately and by using a pair of pedals it can measure each leg individually. Why's that handy? Well, bodies are all slightly asymmetrical and each leg will produce slightly different power readings, so measuring the output of one leg and doubling it can sometimes be misleading. By knowing the variations, you can adjust your training accordingly to compensate. Being a pedal-based system, the Vector can also analyse your pedal stroke. By doing this you can then see how to make your strokes more efficient and harness energy that would normally be wasted.

➔ **STAGES ULTEGRA 6800**
Price: £699
Contact: saddleback.co.uk



STAGES POWER METER

Waiting at the gateway to the world of power meters are Stages ready to guide you by the hand. Their meters replace your left-side crank arm and measure the power output of one leg, doubling it to give you a reading. Team Sky use them and if they're good enough for Sir Dave and the boys, they must have some pedigree.

➔ **POWERTAP G3 HUB**
Price: £499
Contact: paligap.cc



POWERTAP

Created by turbo-trainer producer CycleOps, the Powertap was engineered to be one of the most accurate meters out there, claiming to measure within 1.5 per cent either way. And when you know your power output to that level of accuracy, your training can only benefit. However being a hub-based system, you have build it into a wheel so if you want to race and train on different wheels, you may need one for each set.

➔ **INFOCRANK**
Price: £1,150
Contact: infocrank.uk

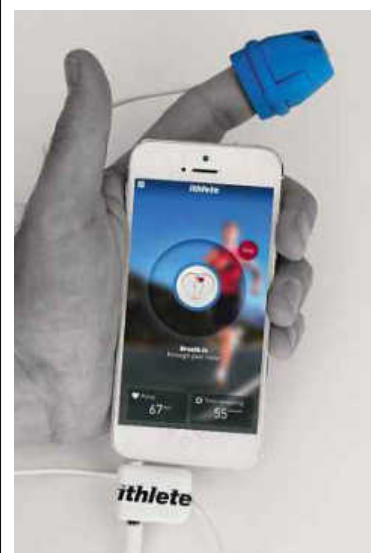


INFOCRANKS

If you want to go the whole hog, go for InfoCrank – adopted by British Cycling for their incredible accuracy. The Australian makers have done away with single crank-arm measurements and have created a whole crank system. By having power recorders in both cranks you get an even more accurate reading than, say, in a system like Garmin's Vectors which need to recalibrating quite frequently. Paying that extra bit of cash means no recalibration is required, no matter what bike you integrate your cranks onto.

ITHLETE HRV MONITOR

■ In 1977, Seppo Säynäjäkangas (yeah, we know, we had to write it!) invented the world's first mobile heart rate monitor that athletes could use as they trained. Seppo (we'll stick to his first name) created it as an aid for the Finnish National Cross Country Ski team before switching its use from snow to tarmac. Since then it's become a mainstay for any training program. Now Ithlete is aiming to change the game with its heart-rate variability monitor.



ITHLETE FINGER SENSOR
Price: £45
Contact: myithlete.com



HOW DOES IT WORK?

■ An average heart rate of 60bpm doesn't mean a single beat per second – the pauses between beats can vary from half a second up to two seconds. Knowing your heart rate variability (HRV) is useful because studies show that athletes who are overtrained have a lower HRV – surprisingly, higher HRV indicates a healthier heart. The Ithlete HRV monitor measures HRV to

give you a clearer picture of how your training is going.

■ By monitoring your HRV you'll know if you're overtraining. This will allow you to better plan training and recovery periods so you can hit those sweet spots for longer. According to Ithlete founder Simon Wegerif, 'By taking a short measurement of HRV every morning and comparing it to your own baseline, you can quickly see

how recovered you are and can therefore decide how hard you are able to train that day. If your HRV is at a good level, you can really go for it, whereas when your HRV and recovery are lower, you can either spend time on aerobic development or take a well-earned rest day. By adjusting training volume and intensity, you maximise adaptation while minimising the risk of overuse injuries.'



AFTERSHOKZ BLUEZ 2
Price: £90
Contact: aftershokz.co.uk

AFTERSHOKZ HEADPHONES

■ Wearing ear-buds while riding is a perennial heated debate among cyclists but these clever wireless headphones work via bone conduction, so the wearer isn't cut off from ambient noise. By vibrating directly against the cheekbones sound appears in the inner ear, with nothing blocking the ear canal itself, so you'll still hear that truck revving behind you.

Using them with an app like Endomondo (endomondo.com) can turn your phone into a virtual coach, yelling split times at you each kilometre or providing alerts when you hit a heart-rate or power zone. Compatible with most music apps, Endomondo also allows you to play motivational tunes at the same time. Plus it's free – or £4.49 per month for the premium version.



SOLOS
Price: £TBC
Contact: solos-wearables.com

SOLOS SMART EYEWEAR

■ Like the hoverboard, decent virtual-reality glasses are one of those magic products that we've been promised is just around the corner since at least the early 80s. While not strictly speaking a virtual reality headset, an augmented reality display like the sleek Solos from Kopin is the next best thing – they're like regular cycling shades but with your metrics projected

onto the lenses in front of your eyes. Unlike similar products, the brains of the Solos are in a paired smartphone app, which frees up space and battery power. Speakers in the arms and a mic allow for audio prompts and voice commands, so you can control what's displayed without removing your hands from the bars. See solos-wearables.com for further details. 🚴

PREPARE FOR AN EPIC *adventure*

PLANNING A BIG RIDE IN 2016?

**20 KEY QUESTIONS ON HOW TO GET IN
SHAPE, ANSWERED BY A PRO COACH**

From top pros like Chris Froome through to Sunday cyclists who enter the occasional sportive, we all like to set ourselves targets – nothing beats the motivation of having a big ride to aim for, right?

But if you want to achieve a good time – and have a good time while you're at it – you really need to put in some training. No two ways about it, training is a necessary evil, whether you're a newbie looking to tackle your first century, or a more experienced rider aiming for an epic endurance challenge like the Ride Across Britain.

So how do you go about it? What's the best way make sure you're in tip-top shape come the big day? How do you draw up a training plan and then fit it into your busy life? Who better to answer all these questions and more than top cycling coach Andy Cook...

WORDS **DAVID KENNING**





THE COACH



ANDY COOK is a former Team GB racer and British Cycling coach with 25 years experience organising cycling events and training camps. He now runs his own coaching business with his wife Jacqui, also a British Cycling-qualified coach, working with everyone from Sport Relief to the Ride Across Britain.

Find out more at andycookcycling.com



THE RIDE



THE DELOITTE RIDE ACROSS BRITAIN is the ultimate British sportive, covering the entire length of the UK from Land's End to John O'Groats (1,555km/966 miles) in nine days. The 2016 edition takes place on 10-18 September. Individual package price for the full event is £1,600, or you can take on just the English or Scottish stages.

Sign up now at rideacrossbritain.com

1

MY BIGGEST RIDE SO FAR IS X MILES, WILL I BE ABLE TO RIDE Y MILES?

AC Whatever your challenge, whether it's your first 50-mile sportive or you're attempting a multi-day epic, stepping up to a new distance can be pretty daunting, but it needn't be, according to cycling coach Andy Cook. 'Yes, 966 miles is a massive amount but physically, we're all pretty capable of doing the distance,' he says. What's important is how you build up to the event and making sure you do at least *some* preparation. 'The biggest limiting factors generally are just time spent in the saddle. A guy turned up to the Ride Across Britain two or three years ago and was obviously struggling even before we got to the first feed station at 35 miles, so we asked him what his longest previous ride was, and he answered, "This is it, this is my longest ride!" He didn't finish.'

2

DO I NEED TO DO STRUCTURED 'TRAINING' OR CAN I JUST GO OUT AND RIDE MY BIKE?

AC 'Italian cycling legend Fausto Coppi was asked what three bits of advice he would give a youngster getting into cycling. Number one was ride a bike, number two was ride a bike and number three was ride a bike!' Cook devises training plans for riders of all levels but is keen to emphasise they're a framework rather than a rigid set of rules. 'A structured plan gives you something to follow but don't get hung up on it. You're not a pro cyclist so if you miss the odd day or two, the biggest mistake is to try to play catch-up, and double the amount of work. What you end up doing then is putting yourself into a really run-down state and the training effect is negated very quickly.'

3

MY RIDE IS OVER SIX MONTHS AWAY. IS IT TOO SOON TO START TRAINING?

AC 'The earlier you're able to start, the better chance you've got of enjoying the ride rather than enduring it. The first year we ran the Ride Across Britain in June and we found we had far more people underprepared. Most cyclists, unless they're very dedicated, don't want to go out in the wind, rain and cold so they don't actually start training until April so by June they've only had six weeks to prepare. By moving the ride to September, riders have had the whole summer to get themselves ready, they've gone out in the light nights, they've done far more riding and they've actually had a few more events to take part in as practice.'

4

MY LIFE IS SO BUSY... HOW MUCH TRAINING DO I ACTUALLY NEED TO DO?

AC 'Consistency is absolutely the key to success. It's better to train for more smaller amounts of time than it is to go out do a massive, long ride, and then have three or four days off.' Always remember the principle of allowing your body to adapt to the effects of training. The training plans Cook devises follow a daily micro cycle, building up over three days then taking it easier on the fourth day. 'It's all about allowing your body to adapt – on the fourth easier day, you're adapting to the training load you put on those first three days. And then as a macro cycle, you do the same thing on a weekly basis – every fourth week is an easier recovery week.'

5

WHAT INTENSITY LEVEL SHOULD I BE AIMING FOR ON TRAINING RIDES?

AC 'Midweek rides should be ridden at what I call tempo pace – other coaches refer to it as sweet spot, or functional threshold power training. So you'd warm up for 15-20 minutes then ride at a pace that's "comfortably hard, not hardly comfortable" – I quite like that phrase, it's sort of, "Oh yeah, right, that means something," and makes it quantifiable without needing all the gadgets. You might only do half an hour to start with, but if you can build those up to an hour, doing two of those tempo sessions a week – where you're riding at a pace where you think, "I'm just on the edge of this" – plus two longer rides at weekends, then that's ample.'



6

I HAVE A TARGET TIME FOR THE EVENT – HOW CAN I MAKE SURE I ACHIEVE IT?

AC 'Those tempo sessions are key because you're raising your anaerobic threshold [the point where lactic acid builds up in the muscles faster than it can be cleared away]. If we were to test you, we'd find the training effect would be that you're changing the way your body uses fat and carbs for fuel. I know because I've been tested when I was racing, that below a heart rate of 130bpm, I'm using fat as fuel. Above 165bpm, I'm using carbs as fuel. Between 130 and 165, it's a mixture. That's why I say "comfortably hard, not hardly comfortable," because that will be a mixture.'

'REST DAYS ARE THE MOST IMPORTANT PART OF ANY TRAINING PROGRAMME'

7

HOW IMPORTANT ARE REST DAYS AS PART OF A TRAINING PLAN?

AC 'Rest days are the most important part of any programme because that's when the adaptation takes place. When you're training, you're putting your muscles into a catabolic state, breaking them down. The body is an incredible machine, it thinks you're going to do that again, so when you're resting, it prepares itself for that and strengthens it. This is why including easier days and recovery weeks in the micro- and macro-cycle of the training plan are important – they're for the body to adapt before you hurt it again. Each time it's rising, getting stronger and stronger.'

8

WHAT OTHER RIDES SHOULD I DO IN THE BUILD UP TO MY TARGET EVENT?

AC 'When I'm advising people for the Ride Across Britain, I don't say you should ride a sportive every weekend – it might not be convenient and it gets a bit pricey – but try to ride a couple of back-to-back events which are both days around 100 miles. It's a good opportunity to try out your kit and make sure your bike's in good shape. Periodise some target events a month apart, so you're using your training and then you've got an event at the end of every fourth week – the recovery week – to use as a bit of practice, to look at your eating strategy, look at your clothing, too.'

9

HOW CAN I TRAIN FOR THE HILLS?

AC 'A lot of people get dead hung up on climbing, but put in the training and your general fitness and general ability will see you through. There are some standard hill training techniques you can practise if you want – in the saddle, out of the saddle, gear selection, all that type of stuff. It does build strength, but what it actually builds more importantly is confidence. And the reality is that hours spent in the saddle getting yourself fit will mean that ultimately you'll get better at climbing hills anyway.'

10

DO I NEED TO GET A TURBO TRAINER?

AC 'I don't use turbo trainers myself – I'd much rather be outside whatever the weather – but they can be very effective and give more bang for your buck. The tempo sessions I've talked about can be completed on a turbo and it might be that you complete three-quarters of an hour three times a week rather than two lots of an hour and a half, as time allows. You get a great workout on a turbo trainer – if you're OK with riding indoors. I personally hate it but there's no doubt a turbo trainer is a useful piece of equipment!' ➔



11

WHAT ABOUT OTHER GADGETS SUCH AS POWER METERS?

AC 'Many cyclists buy expensive training equipment like power meters but don't actually know what the numbers mean, and unless you really do understand what you're doing with the numbers and how the numbers work, there's no point. Of course, if I set you up with all this equipment and tested you, I wouldn't need to explain it to you on feel, I would be able to say I want you to ride at this many watts, or this heart rate. So you don't *need* those tools, but if you've got them and you understand them, they can be useful.'

12

IS IT WORTH INCLUDING GYM SESSIONS AS PART OF MY TRAINING?

AC 'A lot of people ask that question because they're able to nip down the gym on their lunch break. Spin cycling classes are good – it doesn't replicate real cycling but it's giving you the aerobic workout that you require. Stretching exercises are also key. It's important if you're going to be on your bike for eight or nine hours – that's a long time to be sat in that position, particularly if you're doing it day after day after day, so anything that improves flexibility – pilates, yoga, any form of stretching, are really good for you.'

13

HOW IMPORTANT IS IT TO WORK ON CORE STRENGTH?

AC 'Very important, because a lot of the muscles you're using are connected to the lower back and lower back problems are very common in cyclists, but when the core is rigid and properly developed, you can overcome quite a lot of those problems. Older cyclists in particular suffer from prolapsed disc, sciatica, and general problems like tightness in tendons, muscles and IT bands. People can help themselves immensely ahead of a big ride if they get in good shape by having done lots of stretching, pilates classes, yoga and stuff like that before the event.'



'STRETCHING EXERCISES LIKE PILATES WILL HELP IMPROVE FLEXIBILITY ON THE BIKE'



14

CAN I USE OTHER ACTIVITIES IN MY TRAINING – EG RUNNING, SWIMMING OR PLAYING FIVE-A-SIDE FOOTBALL?

AC 'They're all good for developing cardiovascular fitness, but if you get a choice between playing five-a-side football for an hour or going out on your bike, you're better off on your bike because it's more specific. I mean, if you're going to play football for nine days on the trot then go and play football! But running, rowing, any of those kind of things are good, especially at this time of year when the weather's grim and you're less likely to get the bike out.'

15

DO I NEED TO SPEND A FORTUNE ON A NEW LIGHTWEIGHT BIKE?

AC 'Absolutely not! Lots of people who've got into cycling recently have wonderful lightweight machines but most of my team on the Ride Across Britain ride our winter bikes with mudguards. Generally, you want a bike that's comfortable. Some people think they need the latest Pinarello Dogma for eight grand or whatever, but they don't know how to ride it and if it's bad weather they get knackered and they get a wet arse! If money's no object, and you don't mind riding in the rain without mudguards, then fine, but it's not important.'

16

WHAT CAN I DO TO MAKE SURE MY BIKE WON'T LET ME DOWN?

AC 'Many sportives offer support, but make sure your bike is in good nick and you won't spoil your ride by spending time at the side of the road. We get people rocking up on bikes with old tyres that are prone to cuts and punctures, the gears haven't been adjusted properly... There are mechanics on the event but it's far better to make sure that your bike has gone in for a proper check-up at least three weeks before so you've given the bike time to bed down – gear cables, new tyres, new brake blocks, those sort of things.'

18

HOW IMPORTANT IS NUTRITION AS PART OF MY TRAINING PLAN?

AC If you're riding at tempo pace, you're using up your body's glycogen stores, so you need to keep energy topped up. 'Your body can only absorb around 60-70g of carbs an hour when exercising, so eating little and often is the way to go. That means a 750ml bottle an hour with some sort of carbohydrate drink in it, and maybe an energy bar or even real food.' Practising keeping your energy topped up like this on training rides is vital. 'Also think about what brand of nutrition you prefer – if it's not what they use on the event, you might need to take your own, especially if their brand doesn't agree with you!'

19

I'M NOT USED TO RIDING IN BIG GROUPS. WILL I BE SAFE?

AC Being from a traditional club cycling background, Andy Cook is a keen advocate of group riding. 'It's much more sociable and generally safer because you're with other people – cars are going to move around a bigger group. But there are inevitably people on an event like the Ride Across Britain who have never ridden in a group situation before and find it quite hard to adapt, so my team of chaperones are there to help less experienced riders to understand the value of sitting on a wheel, how to point out the potholes and when to single out and how to communicate within the bunch. We try to run training events on closed circuits to start with just to get people used to riding in close quarters without any traffic around and then take them out onto a road circuit and follow the same principles. And entering other rides in the build-up will also provide valuable practice because you're putting yourself in that situation where you'll learn pretty damn quickly!'

20

I DON'T EXACTLY HAVE CHRIS FROOME'S PHYSIQUE. DO I NEED TO LOSE WEIGHT?

AC 'Without a doubt it would help, but you're not a professional cyclist, you've got to live your life. If it's doable and you want to do it, by all means do it, but don't get hung up on it. You need to go out there and enjoy the ride, and you'll eat for England after a big ride because you could be burning up to 8,000 calories just by riding the thing. But if it means cutting out things you don't want to cut out... that's up to you, but it's as much about your willpower and your mental attitude as it is about your physical aptitude.' 🚴

17

HOW CAN I PREPARE FOR BAD WEATHER CONDITIONS?

AC 'Entering other warm-up events can help. I run training camps in Lanzarote and people will be out there riding in the sun every day and they get used to that. But on the day of the event, it could be absolutely atrocious weather, and immediately your head can go. Use your warm-up events to practise your strategy – whether to carry a cape or arm warmers in your back pocket etc. And if you don't have mudguards, you can get used to what it's like to ride with a wet arse for six to seven hours!'



20 NEW THINGS TO TREAT YOUR BIKE TO...

Spring is here (well, it's on it's way)
so why not adorn you and your ride
with some stonking stuff?

WORDS **NICK SOLDINGER**

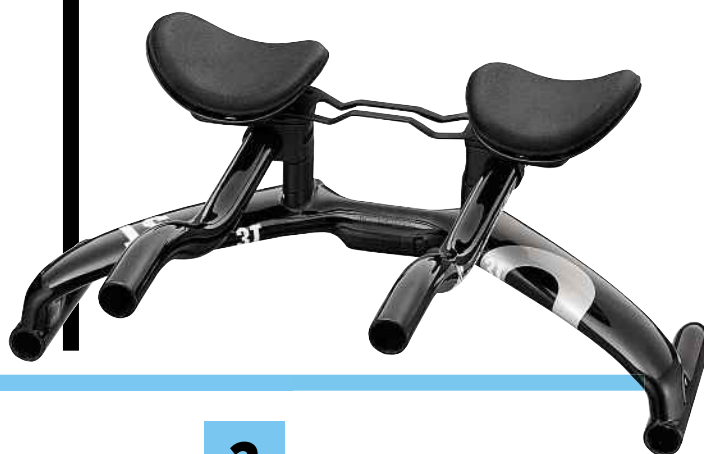


1

3T REVO TEAM AEROBARS

■ £490 ■ i-ride.co.uk

It's not often we see genuine innovations in handlebar design but these swanky aerobars from 3T are literally a revolution – they've turned the traditional bullhorn design through 180 degrees so the grips point backwards. The main benefits, apparently, are improved grip and surer handling on descents, rough surfaces and corners, and the carbon-fibre Team model shown here weighs a paltry 900g. One for the dedicated, marginal gains-obsessed time-triallists everywhere.



2

GIRO EMPIRE REFLECTIVE

■ £230 ■ zyro.co.uk

This year sees the introduction of the Silver Reflective model to Giro's Empire range. These stunners are suitable for everything from Grand Tours to gran fondos. While the full-carbon sole offers superb stiffness, the breathable synthetic upper takes care of business when it comes to ensuring your trotters are comfy. The shoe features an adjustable foot bed that allows you to fine-tune both the fit and the arch support for your feet. Your hooves will be in shiny, silver heaven.

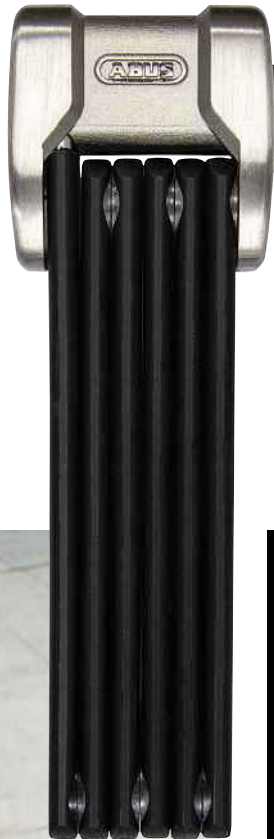


**3****RAPHA CLUB CAP**■ £30 ■ rapha.cc

If you're going to rock the Brevet jersey (right), you've just got to buy the club cap, too. Made from a water-resistant, breathable cotton-elastane mix material, it also features a moisture-wicking, anti-bacterial tape that it'll ensure it stays comfy. That contrast stripe you see through the centre is also reflective so it's sexy *and* safety-conscious, while the elastic fastener will ensure you always look the proper dandy when it's on your bonce. Like the jersey, it comes in two other colourways but this is our favourite.

**4****ABUS BORDO CENTIUM**■ £100 ■ zyro.co.uk

Unlike the entire *BikesEtc* staff, this new folding lock from Bordo is both aesthetically pleasing and very clever. It's body is made up of stainless steel bars and pins that give it its stylish looks when folded up and its enormous strength when deployed. Finished with in a vintage grain leather effect, it's also supplied with a bespoke steel frame and bracket with leather straps so that it can be mounted and carried unobtrusively on your bike's frame.

**5****RAPHA SHORT-SLEEVE BREVET JERSEY**■ £130 ■ rapha.cc

Rapha's new spring/summer collection is, even by their standards, a bit special. Just check out this classic-looking, short-sleeved number that was inspired by brevets – self-supported round the clock rides (aka audax). Made from an insulating and breathable polyester-merino wool mix it features three large pockets at the back plus a zipped valuables pocket, as well as a zipped front. Also available in a black/white, navy/white colourways – they're flippin' gorgeous!

6**VITTORIA CORSA SPEED GRAPHENE PLUS TYRES**■ £60 ■ chickencycles.co.uk

The hype about graphene is that it's going to revolutionise the way bikes and components are made. Unbelievably light, incredibly strong and highly conductive, you're going to see it cropping up lots in the future. The chemists at Vittoria reckon its addition to their tyres has made them almost unbelievably durable, as well as faster and grippier. Still, despite this the fight that broke out in the *BikesEtc* office over who was going to get the job of testing them was largely provoked by how cool their retro gum-coloured sidewalls look.



7

ENVE COMPACT ERGO ROAD BAR

■ £300 ■ saddleback.co.uk

Someone must have spent an awful lot of time doodling on the backs of beer mats when they were dreaming these bars up. Aimed specifically at the smaller rider, every contour has been designed with the smaller hand in mind, allowing for the bespoke placement of brake levers and drop position. Recessed dual cable routing is standard, as are integrated bar-end plugs. Lightweight but incredibly durable, this splendid-looking thing was built with the aim of giving the rider the comfiest ride possible.



8

CLASSIC WIND JACKET

■ £140 ■ rapha.cc

You'll look the greyhound's goolies in this lightweight lovely from Rapha's new spring/summer collection. Made of four-way-stretch fabric, it weighs just 165g in a medium and can be packed down small enough to fit in a jersey pocket. Built to withstand sudden showers and cool conditions, it's windproof, water-repellent and breathable. As well as being extremely dapper, it nods to cycling safety with those reflective stripes on the sleeves and a reflective logo on the back. Good work!



9

DT SWISS R32 DISC-BRAKE WHEEL

■ £250 for one, £425 a pair

■ madison.co.uk

Good wheels can transform your riding experience and these bad boys – fresh from development on the gravel roads of the Swiss Jura mountains – could make your whole bike feel brand new. Sporting the new Aero straight-pull spokes, a 32mm-deep welded rim featuring an 18mm internal profile, these hoops are as strong and as they are versatile and come tubeless-ready while also being usable with standard clinchers.

10**ALTURA PODIUM ELITE JERSEY**■ £75 ■ zyro.co.uk

If you're a patriotic chap who likes to rock a bit of pro kit, check out the new One Pro Cycling jersey that Peter Williams and the boys will be wearing in their inaugural season as Britain's only UCI Pro Continental team this year. It does all the stuff you'd expect from a quality jersey, including superb moisture management, carefully thought-out design to ensure maximum comfort, strategically located reflective trim for increased visibility plus five rear pockets (including a zippered security one). It's got winner written all over it!

**11****SELLE ITALIA SMOOTAPE GRAN FONDO BAR TAPE**■ £13 ■ chickencycles.co.uk

Some innovations require masses of technological research and hours beaver away with prototypes and designs. Some are more likely to provoke a 'Durr, why didn't I think of that?' response, like strimming the edge off of your bar tape so it lies perfectly flat, rather than creating a less-than-pleasurable ribbed effect. Available across a range of different styles and colours Selle Italia's Smootape solves a problem you probably never knew existed.

**13****GIRO SYNTHE MIPS**■ £225 ■ zyro.co.uk

As acronyms go, MIPS doesn't seem too roughly-toughly but it actually stands for the much harder-sounding Multi-Directional Impact Protection System. If you've not heard of MIPS yet, it's an extra layer inside the helmet that moves in an impact to reduce the effect on the brain of rotational injuries. But Giro hasn't just ploughed endless research and development into safety, it's also given plenty of thought to design – the Synthe is also aerodynamic, lightweight and good looking. And it has a nifty dedicated sunnies dock, too. ➔

12**PANARACER GRAVEL KING**■ £30 ■ zyro.co.uk

Larger volume tyres are all the rage and these from Panaracer are a great option. Available up to 32c width, they have that bit of bulk that can provide extra comfort while still being quick on tarmac, making them ideal for sportives. While they're designed to give you wings on the road, they also have grip a-plenty on cycle tracks or towpaths, and the toughened PT protection means your chances of coping a flat while you're mid jaunt are greatly reduced. We like 'em. In fact, you could say we're pumped.



14

CAMELBAK PODIUM BIG CHILL BOTTLE

£16 ■ zyro.co.uk

In our quest for sartorial cycling perfection we're always on the look out for new things to complement our ride and our gear – and that extends to the humble water bottle. CamelBak Podium's Big Chill Bottles have been treated to a makeover for 2016 and now come in Metric Mint, Pace Pink, Breakaway Blue and Sprint Green (ideal for Peter Sagan to match the green jersey he'll inevitably wear in the Tour). The 750ml bottles feature double wall insulation to keep your drink chilled for longer. Which is, erm, cool.



15

SIDI WIRE CHRIS FROOME SIGNATURE SHOES

£300 ■ saddleback.co.uk

Release your inner winner with these beauties that are finished in the same light-blue colourway that Chris Froome pedalled his way to Tour de France glory in last season. Made by Italian company Sidi, the Wire is its top of the range model which features a stiff, light carbon sole with an upper that features the company's fancy Techno-3 system, which essentially consists of two dials, along with a ratchet strap at the top which allows you to fit the shoe to the needs of your foot. Champion!



16

SEASUCKER HORNET BIKE RACK

£160 ■ chainreactioncycles.com

Meet the world's smallest bike rack (so small, in fact, that it comes in its own 9.5in x 7in bag). Ideal for hatchbacks, SUVs and vans – basically any vehicle with a rear window to which the rack's fixtures can stick. The fixtures are basically industrial-strength vacuum pads that you can pump the air out of so that they suck onto your car's rear window. Each pad is capable of 120lb of pull pressure, and they're recommended for bikes weighing up to 35lbs (15kg) – which really ought to be plenty for transporting your pride and joy to that sportive.



**17****PROFILE DESIGN LEGACY II AEROBAR**■ £70 ■ madison.co.uk

This update of Profile Design's Legacy bar features improved ergonomics and added hand positions – just check out the fancy width-adjustable armrests, which are also capable of rotational adjustment. The simple design means these bars step on the scales at a relatively svelte 450g and at that price are an ideal entry-level item if you're thinking about time-trialling or having a crack at a triathlon this year.

18**PARK TOOL MT-40 MULTITOOL**■ £50 ■ madison.co.uk

Weighing at a mere 243g, this rather splendid little fellow has just stepped off the plane from the United States of 'Murca and is fresh on the UK market. It features 2.5, 3, 4, 5, 6 and 8mm hex wrenches, a T25 & T30 Torx compatible driver, a combo cross/straight-tip screwdriver, a 10-speed compatible chain tool, a CO₂ cartridge inflator adapter, oh and a keyring holder. Packs a lot in, doesn't it?

**19****MADISON CLOTHING SPORTIVE SHORT-SLEEVE JERSEY,**■ £45 ■ madison.co.uk

Madison's sportive special gets a handsome new look for 2016 – but it's not just pretty, it's practical, too. Made from super-soft, stretchy fabric with vented mesh side and under-arm panelling, it's comfy to wear and great for keeping you sweat-free. There are three pockets in the rear plus a fourth zippered one for valuables, and a full-length zip on the front complete with soft-lip guard to avoid irritation. That's a lot of jersey for not a lot of dough.

20**THULE PRORIDE 598**■ £100 ■ madison.co.uk

If you're planning to take your bike anywhere by car this year (on holiday? to a sportive?), check out this just-released update to Thule's popular 591 roof rack. We reckon the cleverest new feature is the clamp, which now has a torque limiter so there's no danger of over-tightening and damaging delicate frames. The soft rubber jaws will also prevent scratching, and the clamp and wheel-retaining straps are lockable to deter would-be thieves. 🚲



EAT TO WIN

BikesEtc catches up with Team Wiggins' performance nutritionist David Dunne to get the skinny on how the best in the world fuel their rides

WORDS **CRAIG CUNNINGHAM**



Performance nutritionist David Dunne is official adviser to Team Wiggins





Like the pros, we weekend warriors all have our aims for the new season. For some, it's to best last year's total mileage on Strava, for others to nail that sportive, or savour the glory of winning a race. So what foods should we be eating prior to leaving it all out there on the road? We spoke exclusively with David Dunne, Team Wiggins nutrition supremo, and opened Pandora's snack box.

'When you're looking at any sort of endurance event that lasts a couple of hours,' Dunne tells *BikesEtc* over an espresso, you're going to need to look at topping up your muscles' glycogen store. So the 24 hours before it's a good idea to run a "carbohydrate load" and for most endurance athletes that looks like 8-12 grams of carbohydrate per kg of body weight. This is how we can top up glycogen while also having enough reserves there for the event itself.'

The idea of carb-loading is hardly a new ➔



one. In fact, it's a strategy that's been employed by long-distance cyclists for years. However, utilising it to the shape of an individual cyclist's needs is what modern nutritionists like Dunne are working to perfect with the people they work with.

'If it's quite a hilly race,' Dunne explains, 'the biggest worry people have is that they'll feel like they've put on a kilo just from eating that volume of carbohydrates prior to the start. So what we try to do is stick to lower-residue, lower-fibre foods 24 hours before the start because they'll reduce some of the stress on your gut. That's why you stereotypically get chicken and rice as a pre-ride meal. Rice is a nice high-carbohydrate food but it's also a low-residue food, which in plain terms means it's easy on your gut. You can have a high volume of it without feeling bloated. And you can always sneak in some extra carbs with a dash of honey!'

This is what Dunne acknowledges as eating smart. There are plenty of questionable trends around cycling these days but eating smart is something that appears to actually pay dividends. When it comes to the day of the big ride, your body naturally comes under a lot of pressure and digestion can be affected, which in turn can cause problems. 'If you've got a high-fibre diet in the lead up to a ride,

you'll have a lot of fibre left in your gut when you're on the road. That's when people tend to get gut issues like stomach cramps,' Dunne explains. 'Lower residue foods, meanwhile, minimise gut stress while keeping fuel stores high for competitions.'

Train low for high performance

Not that you should be thinking about ditching bread and breakfast cereals. On the contrary, these can both be part of a healthy balanced diet and will actually help prepare your body. As Dunne says, 'It's important to keep eating fibrous foods along with more whole foods and antioxidants because it's vital for your gut health come the day of the target event. So that when you do eat the high-carb, low-residue foods prior to your event, your gut is ready to go.' In other words, the high-fibre fare has trained your digestive system to cope with the low-residue grub. According to Dunne, the pros at Team Wiggins will keep their stomachs working hard like this before tapering off prior to an event, much like they would with any other aspect of their training so that they're in optimal condition to race.

Developments in the world of nutrition from the 1990s onwards – the so-called rise of nutritionism – has meant that today the thinking behind how best to refuel a cyclist is more accurate than it's ever been.

'If we're, say, looking at manipulating a rider's adaptation for an endurance exercise, because we've now learned so much about stuff like the train low model in the last couple of years, it's definitely evolving into more of an exact science,' says Dunne.

The 'train low' model that Dunne talks of is a method that's found growing popularity among pro coaching staff, particularly Dr James Morton, the Team Sky Performance Nutritionist. Morton has conducted extensive research into the idea that if you train with

KNOW YOUR NUTRITION

A quick jargon-buster

ENDOGENOUS CARBOHYDRATES

These are carbs that are already inside our body (endogenous), and are stored in the muscles and liver in the form of glycogen.

EXOGENOUS CARBOHYDRATES

These are carbs from external sources, ingested and used almost immediately – such as the fast-acting sugar in energy gels.

LOW-RESIDUE FOODS

These are foods such as rice and ripe bananas that are low in non-digestible content (ie fibre), so don't make your stomach work too hard to process them.

AMINO ACIDS

Building blocks that help repair your muscles, and the core value of protein. Including them in your diet in free form has been shown to help promote muscle mass, recovery and support the immune system during periods of intense training.

MACRONUTRIENTS

These are the foundations of our diet, mainly food that we tend to eat a lot of for energy or basic calories. For example, carbohydrate as a food group is one of the major macronutrients, while vitamins and minerals are unsurprisingly regarded as micronutrients.





low carbohydrate availability you can adapt your body to cope without it. Then, once the availability is upped again, the rider will store energy more efficiently, having trained on less. Dunne elaborates, 'All of a sudden, your weight is a little bit better. Your weight-power ratio is a little bit better. All because you've held back on calories or carbohydrates at certain times but kept protein availability high to maintain or enhance muscle mass.'

Incorporating rides into your training plan once or twice a week before and during which you follow these eating guidelines – ie where you've refuelled with protein rather than carbs – will help your body work more efficiently on the day of the ride. Not that Dunne is a fan of so-called fasted training, where you eat nothing with the aim of dropping more weight. 'The worst mistake that people can make,' he tells us, 'is to go out on a fasted ride for four hours where they just have nothing. Not only will they start to lose body fat but they'll lose muscle, too, and that's the worst scenario when you're trying to increase your power to weight ratio.' In other words, supplementing yourself with protein

'If you train with low carb availability, your body will adapt and store energy more efficiently'

David Dunne's nutrition advice helped power Sir Bradley Wiggins to the Hour record last June



Photography: Andrew Last / CC BY 2.0

and water throughout a ride gives you the greatest chance of maximising your power to weight ratio – the Holy Grail of road cycling.

As you would with a hillier sportive, or a multi-stage event, altering your dietary plan is also a must if you want to tackle a time trial (TT). Dunne, who was the man who helped fuel Sir Bradley Wiggins' spectacular smashing of the Hour record last year, gave us a glimpse into how that was achieved. 'The shorter duration and higher levels of lactate mean you'd want to increase your input of dietary nitrates,' Dunne explains. 'These help your body deliver oxygen and nutrients to muscles quicker during sporting activity.'

Beetroot juice has been praised for some time in the cycling world, with hotshots like Mark Cavendish tweeting its praises, and Dunne agrees that it's a great thing to guzzle.

'Six days prior to your event you should load up on beetroot juice, which is full of nitrates. By doing so, your body will adapt and come race day you'll have given it a great chance of delivering oxygen to muscles efficiently and quickly. With TTs you're rarely going to feed on the bike, you're just going to get your head down and power through, but it's still important to prepare properly.'

Learn from the pros

Being properly fuelled before a sportive is also important, but once the event is underway you'll also need to keep yourself fuelled throughout. Like the pros, you need to keep feeding your system little and often to maintain your stores of energy. 'While riding, aim to eat 30-90g of carbohydrate per hour,' Dunne reveals. 'This can come in the form ➔'



best way to go. The SIS Whey20 gel is perfect for this, fast-absorbing, rich in amino acids especially leucine. It'll stimulate muscle resynthesis and keep it elevated.'

Leucine is crucial for repairing muscles after their tissue has been broken by exercise. This branch chain amino acid (BCAA) is the trigger for muscle growth stimulation, and ingesting it will kick-start the process of repair, and ultimately muscle growth.

Get your two-day protein fix

However, your protein needs aren't going to be satisfied just by scoffing a protein gel or two as soon as you get back home from your ride. According to Dunne, after serious physical exertion a rider's need for protein will stay elevated for the next couple of days. 'After getting that initial hit in,' he says, 'you should look to ingest a further 160-480g of protein over the next 24-48 hours.' Dunne's claims are backed up by scientific studies that prove your body cries

out for protein 24 hours after serious physical effort and that if you fail to deliver it, muscle repair will misfire.

With this all this in mind, what should the diet of a *BikesEtc* reader look like? 'Establishing a good diet is all about eating healthily, getting a routine with your body and seeing what works for you,' Dunne says. 'Try a meal once, adjust it the second time you use it to see if there's a difference in performance, and then make sure the third time you use it, it's optimised. You'll find a lot of the high-end cyclists now will know if I tweak something in their food, even if it's just a little bit. When they try it they'll know if they are comfortable with it or not and we'll adjust accordingly.'

When all is said and done, though, if you want to eat like Wiggo you need to get the basics right – it's a point Dunne mentions frequently throughout our conversation. We may idolise the pros, with their specialist equipment, training and lifestyle, but ultimately, according to Dunne, they're at the top of their game because they do the simple things better than us – and that includes eating. 'If people can prioritise good-quality, unprocessed, whole foods, get their protein timings right and make sure they're fuelled enough for big sessions, they'll see marked improvements. My advice is to stop looking for fads and just get on top of the basics.'

So there you have it. For many of us, nutrition is an afterthought but while French playwright Molière might have reckoned 'one must eat to live', as Merckx and Hinault have evolved into Wiggins and Froome, it's become obvious that, in fact, one must eat to win. 🚴

of gels, energy drinks, snack bars, rice cakes or fruit and nuts. The biggest problem that many riders get wrong is that their race-day diet hasn't been practised. Riders will say to themselves, "I need to have 60 grams of carbs per hour for the next four hours," but if they haven't trained on this, they'll be putting a quantity of carbs into their bodies that their guts just aren't used to digesting. Issues will start to arise in their stomach with cramps or even diarrhoea potentially setting in.' Dunne's advice is clear – by trying out your event-day diet plan multiple times before the actual event, your body will be prepared for the quantity and type of calories you blast into it.

In a world where recovery is just as imperative as the preparation, it's hard not to think of Graeme Obree (our interviewee on page 32). Having failed in his first attempt at the Hour record in 1993, he went at it the again the following day and broke it. This fabled tale is unique in the world of cycling but it's not to be tried at home! In fact, it's imperative that you recover appropriately after training or an event, as you'll be doing yourself more harm than good.

'Immediately post-ride there's a case for the three Rs,' says Dunne. 'Repair, restore and rehydrate. First you've got to repair your muscle. You need to supply muscles with the raw materials like amino acids. Ingesting some protein as quickly as possible is the

'After serious physical exertion, a rider's need for protein stays elevated for the next 24-48 hours'



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CHANGING GEAR

All the cycling stuff you never knew you wanted reviewed, previewed, tested, ridden and occasionally broken – all in the name of finding out more about bikes etc...

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THE AWARDS Meet the coveted gongs we lavish on for excellence



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The overall winner in each group test. Scoring highly in all criteria, it will be an excellent all-rounder. Where two or more items achieve equally high scores, it will be the one that has that extra something – a touch of style, a special feature – that takes the prize.



BikesEtc Gold Award
This prestigious award goes to bikes, accessories, components or items of apparel with exceptional levels of performance, design and build quality that make them must-haves. Don't expect to see it every issue – we only hand it out when it's truly deserved!

RAPHA'S NEW

SHADOW

Rapha's stealthy kit promises protection from extreme conditions. We put it to the test

GEAR

IS IT WORTH £480?



The brushed collar is close-fitting but not too high



Reflective tabs inject some visibility into the otherwise all black palette



Designed for racing, there's little room to smuggle an extra tyre



It's sod's law that the moment you send a domestique back to the team car to retrieve the squad's rain gear, someone will launch off the front, causing the whole peloton to sprint off in pursuit. This fact isn't lost on Team Sky and it got them and their clothing supplier thinking. If only a team's gear could insure against the odd downpour while not overheating when the sun pokes back out, there'd be fewer trips to the team car and less potential for their riders to be caught out. After tinkering with different options, their solution is the new Pro Team Shadow bibshort and jersey combo. Designed to meet the demands of pro riders, the significantly less professional team here at *BikesEtc* pulled it on and headed out into the rain to give it a thorough testing in good old British winter conditions.

All-weather performer

Rapha's Shadow fabric is clever stuff. Unlike traditional laminate materials, it's woven. Made of threads treated with a durable water-repellent (DWR) coating, it's heated in an oven to shrink the weave, producing a material with almost the same wind and water resistance as a shell fabric but a lot more breathable. It's also highly stretchy for a very close fit.

Although the jersey can be worn directly against the skin, we found this a somewhat nippy option on brisk days, as a lack of insulation means windchill is eventually transferred to the rider. However, when paired with a base layer, its ability to keep out the cold becomes obvious. Trying to build a head



Even the subtle stripe motif is designed to repel water

of steam, neither top nor bottoms ever got clammy, suggesting moisture is indeed freely absconding. Three-quarter length sleeves add warmth and pair well with arm warmers by clamping them in place, although this effect is diminished if you've got scrawny biceps like us.

Riding into the rain, the top refused to let any through, most of it rolling off before having a chance to sink in. For weather-beating abilities there's little to tell between this and more traditional shell materials, except for the much improved fit and breathability.

Although made of the same material, the shorts lack the selective seam taping found on the top so are a little more prone to letting water through. To be fair, although they didn't keep us absolutely dry, we can't think of another pair of shorts that would have. This is still very capable and clever kit.

Yes, it's pricey, even for Rapha, but if you want the best, you have to pay for it. ➔

Just to hammer home how serious this kit is, it's only available in black

**RAPHA PRO TEAM
SHADOW JERSEY**

Price: £220

**RAPHA PRO TEAM
SHADOW BIBS**

Price: £260

Contact: rapha.cc

Wind and water resistance are almost comparable to a shell fabric

WEATHER-BEATING JERSEYS

NINE CHEAPER ALTERNATIVES TO RAPHA'S PREMIUM SHADOW WEAR



CASTELLI GABBA 2

► **WHAT THE MAKERS SAY** Ideal foul-weather race equipment, you're sure to spot Gabbas in the peloton whenever the weather turns nasty, and not just on Castelli-sponsored riders.

► **WHAT WE SAY**

A true original. Not to be confused with the subgenre of techno music, Gabba is Castelli's answer to surviving the spring Classics. Arguably

never bettered, this jacket is a real wish-list item and has likely won more magazine tests than any other. Made with Gore Windstopper X-Lite Plus fabric, it's bulkier than Rapha's Shadow jersey but does an amazing job of keeping out the cold.



£140



castellicafe.co.uk



PACTIMO STORM HYBRID

► **WHAT THE MAKERS SAY** Fits like a second skin with an elegant, supple feel and extreme breathability. Aerowind thermal fabric with a DWR finish for superior water resistance.

► **WHAT WE SAY**

A fleece lining means this jersey is comfortable enough to wear directly against your skin, while easily deflecting most showers. Pactimo will even knock them up in your team or club's colours.



£145



pactimo.co.uk



ETXEONDO TEAM EDITION WINDSTOPPER

► **WHAT THE MAKERS SAY** High-performance windstopping jersey and arm warmers for days when the weather gets messy. As used by Team Giant-Alpecin riders on the coldest stages.

► **WHAT WE SAY**

Made entirely of Goretex Windstopper fabric, this race-cut jersey won't blink when confronted by stormy weather. Very smart looking, and the included arm warmers boost versatility.



£130



etxeondo.com



CAPO LOMBARDIA DWR JERSEY

► **WHAT THE MAKERS SAY** Race-inspired fit and performance in a jersey that provides foul-weather protection. Italian fabrics keep you warm and dry when it's cold and wet.

► **WHAT WE SAY**

A membrane-type outer face is backed by anti-bacterial Super Roubaix fabric to keep you warm and smelling sweet, while the high collar and long sleeves provide superior coverage.

 **£110**  capocycling.com



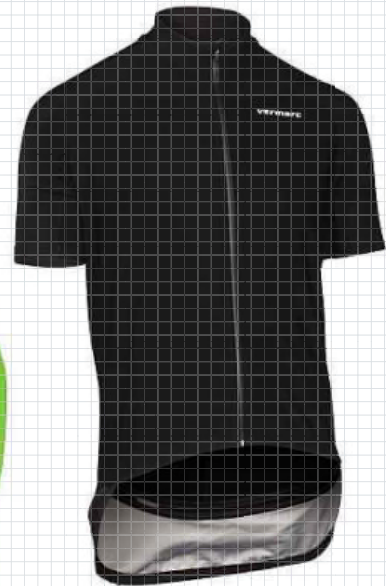
ENDURA EQUIPE CLASSICS

► **WHAT THE MAKERS SAY** Stretchy, lightweight, water and windproof while remaining highly breathable. Comes with matching arm warmers to provide adaptable protection.

► **WHAT WE SAY**

The Scottish know about surviving bleak weather and it shows in this jersey. Close-fitting, strategically placed thermal panels boost warmth. Also available in black.

 **£140**  endurasport.com



VERMARC ZERO AQUA PRR

► **WHAT THE MAKERS SAY** Perfect for days when you seem to be facing four seasons in one day. Couple it with some arm warmers and let Mother Nature do her worst.

► **WHAT WE SAY**

We liked this jersey the second we pulled it on, a feeling that only grew when we saw the price – it performs as well as much more expensive jerseys. Impeccable warmth and weather protection.

 **£102**  chickencycles.co.uk




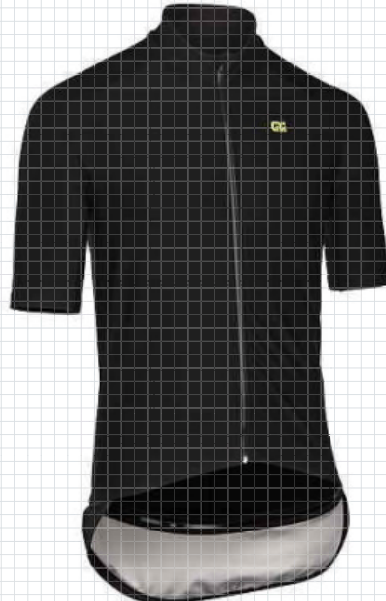
SANTINI REEF RAIN JERSEY

► **WHAT THE MAKERS SAY** Made of breathable membrane fabric, this jersey has an aerodynamic fit and is cut with a longer back for added protection from rain and spray.

► **WHAT WE SAY**

Although designed with racers in mind, reflective trim across the jersey makes this a good option for use on the open road. The sizeable bum-flap adds serious protection for your posterior.

 **£140**  fisheroutdoor.co.uk



ALÉ KLIMATIK JERSEY

► **WHAT THE MAKERS SAY** Short-sleeve shell for cold and very wet conditions. Breathable 'No water' fleece fabric on the back is twinned with a windproof front.

► **WHAT WE SAY**

Available in a range of block colours. Combining different fabrics to provide maximum water resistance, breathability and stretch where they're needed, the Klimatik's fit is impeccable.


 **£150**  paligap.cc



LE COL THERMAL JERSEY

► **WHAT THE MAKERS SAY** Perfect transitional kit for hard-to-predict days, giving you protection from wind and rain. Ideal for competitive club runs or early season racing and training!

► **WHAT WE SAY**

Only available in black, this low-key jersey wears its tech features lightly. WindTex fabric is as breathable as any while still ably battling away all but the heaviest showers. 

 **£150**  lecol.net

CHOOSE YOUR CYCLING CHALLENGE CHANGE A LIFE



CHALLENGE95

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- You change lives.

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WORLD BICYCLE RELIEF®



SATNAV vs SKILL

Man or machine – which is better? There's only one way to find out...

From military grade satellite systems to Mr T telling you to turn left at the next junction, the rise of GPS has made us all navigators. But how does it all stack up for cyclists? Well, we thought we'd put it to the test by pitching Garmin's most intuitive cycling computer, the Edge 1000, against the most powerful computing tool in the world, the human brain. More specifically, the brain of seasoned cycle

courier and one-time holder of the 18,000-mile record for circumnavigating the globe on a bike, Mr Julian Sayerer.

Pitted against Julian was *BikesEtc's* very own Craig, who we armed not only with the very best bike GPS in the world, but a superb 22-speed Bombtrack Tempest worth £1,500. Oh, and just in case you're wondering Julian was on an old single-speed steel conversion, which was worth a lot less. Having cycled

the streets of London for three years, however, his head holds knowledge of back alleyways and beelines that can only be gained through hard experience.

As the wind buffeted our competitors on a grey Friday morning, they were both handed three postcodes to reach in London. Their starting point was the middle of Dalston, in sunny Hackney, east London. While Julian sped off, our chap entered his destination into his device. ➔

**CRAIG
CUNNINGHAM
BIKESETC**

**JULIAN
SAYERER
CYCLE COURIER**



**GARMIN
EDGE 1000**
Price: £440
Contact:
madison.co.uk

The Edge 1000 spat out his route almost instantaneously and away he went. Two metres down the road, though, he stopped. Through his own buffoonery, he'd somehow managed to lose the map the Edge had given him and couldn't seem to recover it. Drastic seconds flew by as he fiddled with it.

When he finally got the map back and clipped in again, vital minutes had been lost. We'd like to be able to report that this was the last mishap he experienced in the race. But it wasn't. No, siree.

Taking the scenic route

As Craig pummelled down Kingsland High Street, he got his first order from his electronic brain. Channelling him from the hustle and bustle of the main roads, he soon found himself ploughing along quiet back streets, bunny-hopping speed bumps and keeping an eye out for car doors. This smooth ride gave our chap a chance to marvel at the wonder that was his electronic guide. The intelligent mapping technology developed by Garmin tracks 6.7 million miles of road across the UK and Europe, and here he was being led along just one tiny sliver of that digital world.

As he sprinted down towards the river, using all the back roads that his Garmin could find, his fellow racer chose to ride alongside the city's canal system. Julian's knowledge of London saw him take the steady but scenic route. Whereas our man found himself tangled up in every red light, Julian simply

whisked his way along the old waterways of London's industrial past.

The wind grew and grew as Craig neared his first destination, The Grapes pub on Narrow Street, deep in the heart of London's old Docklands. By now, he and his Garmin were working together perfectly. Consulting it every other second, he felt confident that he could make up for the time lost at the start. It had positioned him on London's blue east-west Cycle Superhighway, which leads through car-free parks and over footbridges.

As he approached his initial objective, however, he heard someone shouting his name. Looking up, he saw Julian waiting by his bike. Apparently, he'd been there for a while, expecting to meet the *BikesEtc* photographer for pictures. 'No, this is a race! You get to the spot and move on,' Craig told him. 'How long have you been here?'

'About a minute,' came Julian's reply.

A minute? The life of a cyclist is counted in seconds. Tiny snippets of time that are the difference between glory and despair. Craig was devastated but being an honourable chap, offered to wait 60 seconds so Julian could restore his lead.

'A minute? I won't need it mate,' Julian laughed as he sped off into the distance.

Lost in the city

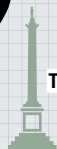
As the pair raced to their next point in Vauxhall, five miles to the southwest, Craig was drawn deep into the heart of the metropolis, while Julian's know-how led



Garmin's mapping tracks 6.7 million miles of UK roads



**FINISH
THE MALL**



TRAFALGAR
SQUARE

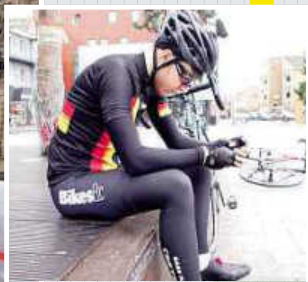


THE
LONDON
EYE





**START
DALSTON**



**VICTORIA
PARK**



now rang in our man's ears. 'You can look any address up on a phone or GPS,' Julian had told him before they set off, 'but it will always give you a very narrow context.' But it wasn't a narrow context that was going to cost our man the race – it was idiocy.

As Craig began picking his way across the bridge, to his total surprise the Garmin told him to turn around. It didn't seem right but Craig's response was to do EXACTLY what he was told. After all, he figured, this device uses the Russian GLONASS (Global Navigation Satellite System) network. It also uses the US-built GPS (Global Positioning System). That was a combined total of 55 satellites out there in space helping him to cross the capital.

Surely the Garmin must know what it's doing? Well, yes, it did, it's just that our chap didn't. And as he rode back to the north side of the river again, the Garmin told him to do another U-turn. By now the penny was beginning to drop. So

poking into the map, Craig zoomed out to get his bearings, only to realise that, in his haste, he'd missed a small side road on his return trip across the bridge. So he crossed the bridge for a third time(!), finally found his slip road and sped off towards his destination.

Doing the knowledge

The idea of pitching a well-versed brain against a computer device that has access to technologies floating in orbit around the planet is a tricky one. 'The brain is actually able to do more calculations per second than even the fastest supercomputer,' says Kwabena Boahen, associate professor of bioengineering at Stanford University in the States (he clearly hasn't seen our Craig on a Monday morning). These calculations are basic instincts, though, like how deep your next breath needs to be or how much grip you'll need to pick up an object. Julian's brain calculates his route with ease, the streets of London are instinctive after years of cycling them. 'Eventually you learn it,' he tells *BikesEtc* after the race, as he fingers the pages of a shabby *AtoZ*, 'it just sinks in.'

However, not everyone has the time or inclination to learn the roads this way and

him south of the river. As Craig struggled through the traffic-choked streets, he knew that this was where the Garmin could make or break his race.

He hit his first test by the Tower of London – roadworks. Amid fluoro-clad workmen, and the cacophony of pneumatic drills and blaring horns, Craig's Garmin told him to go right over a 5ft by 5ft hole in the ground or take a one-way diversion around the block. Like an urban cyclocross pro, he dismounted and jumped the pavement with his bike hoisted on his shoulder and legged it. With the obstacle suitably negotiated, he then clipped back in and got the cranks spinning as fast as he could. Unfortunately, he stumbled upon several more sets of roadworks over the next couple of miles, slowing him down further. In the meantime, the savvy cycle messenger was steadily weaving his way through a maze of lanes on the south side of the river.

Caught in a jam

Having squirmed through the unforgiving gaps on Queen Victoria Street, Craig found himself on Blackfriars Bridge, where a race-day nightmare awaited him. Road works either side of the road meant the bridge was solid with traffic. Julian's pre-race wisdom

**TOWER
BRIDGE**

The Edge 1000 uses both the Russian GLONASS network and the US-built GPS system – a total of 55 satellites



that's where the Garmin Edge 1000 comes into its own – especially in the thoroughfares and alleyways of an urban sprawl. The accessibility of its technology means you don't have to spend years memorising every cobble and corner when you go to ride in Paris, Bruges or Amsterdam. It means you can fly to the Alps and find your way to the summit of Alpe d'Huez without having to test the limits of your GCSE French by asking for directions. That alone warrants the highest praise.

Now back on track, our chap found himself riding head on into the wind along Albert

In an unfamiliar city, the Edge 1000 comes into its own

Embankment, and struggling to pick up any threatening pace. The newly paved Cycle Superhighway was a pleasant change from an undulating ride along Belvedere Road and Lambeth Palace Road. Arriving in Bonnington Square, Vauxhall, there was no sign of Julian. Craig's Garmin beeped – a reminder that he needed to press on to his final destination – The Mall and Buckingham Palace.

Ride like the wind

With the wind at his back, he rode hard, not knowing whether he had finally lurched ahead of his fellow racer or not. As he sped over Westminster Bridge and past Big Ben, swells of tourists poured in and out of Westminster Square. Racing along Whitehall, trying to ride the wave of green lights, his Garmin pushed him on, as Craig got himself in the zone. He wanted to win this and the idea of a sprint finish was something he'd been talking about for weeks. Up ahead, he spotted a rider. Getting down over the bars, Craig dug deep. This was it. Both riders turned the corner onto the Mall, with Craig a mere 10 metres behind him. Sprinting up towards the golden statue of Victoria Craig sped past the other bike. He was a colossus, a hero, a man who could rightfully take his place in the Pantheon of road cycling fame alongside such luminaries as Wiggins, Simpson, and Merckx... well, he could if the guy he'd just taken had actually been Julian. It wasn't.

'Craig!' a voice called at him from across the road. It was Julian. Sitting by the side of the road looking well chilled. He'd been there for 15 minutes. Comparing routes, it became

START
DALSTON

clear where our man had gone wrong. The Garmin was a great little device, it had dragged Craig down routes he'd never have considered and along cycleways that let him switch off and race. But it had also played its part in Craig's failure. Along with his spindly legs and general incompetence.

Julian is a local's local though, his brain had gone over these streets a thousand times or more. And one positive we can take from this little experiment is that we humans can rest easy in our beds. The rise of the machines, it would seem, is still some way off.

The final verdict

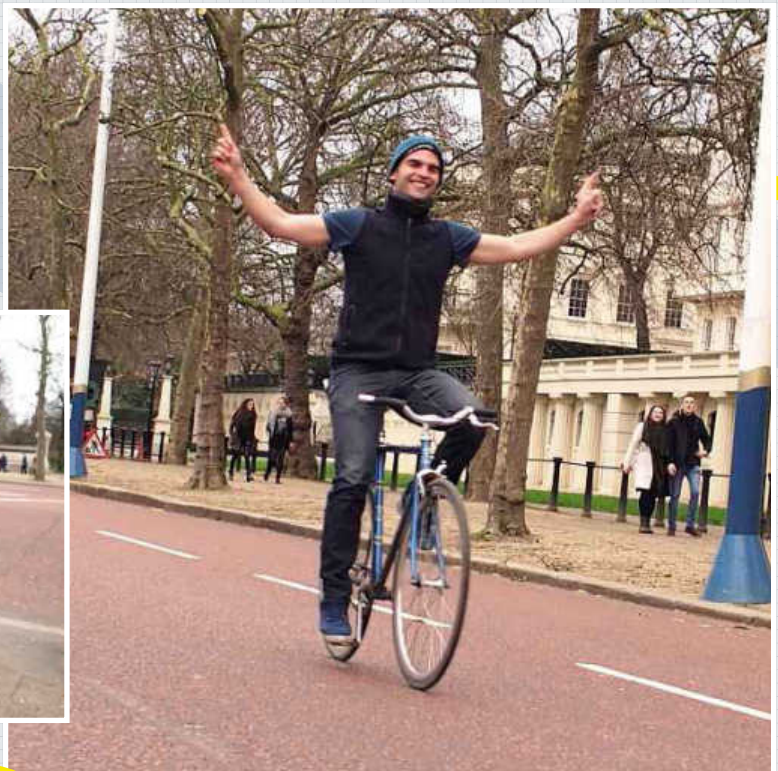
In defence of Craig's little electronic friend, however, it did the job he asked of it. Yes there were problems, but he mostly found it easy to follow and the Open Source mapping meant it was extremely accurate. Operating with superb satellite coverage and smart technology, the Garmin gave our man expert guidance through London. Julian and others of his ilk have navigational superpowers, no doubt, but for us mere mortals the superb Garmin Edge 1000 helps level the playing field. Well, maybe just a little.

When not dropping people on bikes, Julian Sayerer writes and has recently released his latest book, Messengers: City Tales From A London Courier, priced £8.99 – see arcadiabooks.co.uk for details

FINISH
THE MALL



BUCKINGHAM
PALACE



AND THE WINNER IS...

THE CYCLE COURIER. But to be fair, the Garmin Edge 1000 is a superb bit of kit and without it, Craig would probably still be lost on the streets of London now

YOU ARE HERE

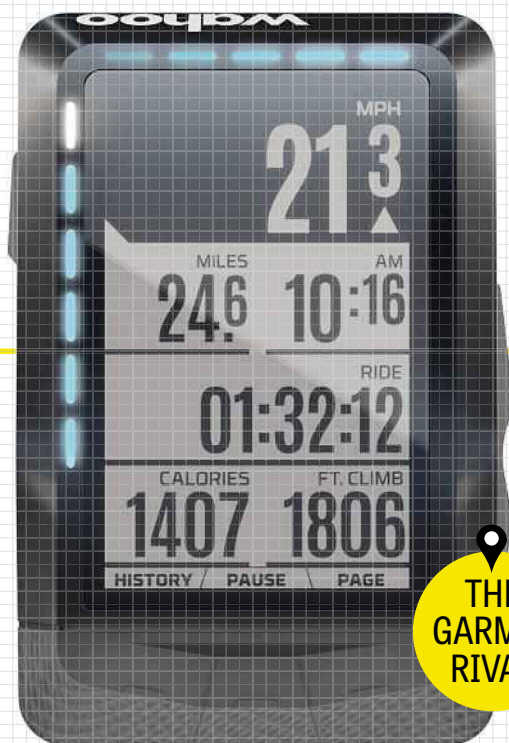
Four alternatives to the Edge 1000 that will keep you on track

Challenging a bike courier to a race through the streets of London is an extreme way of finding whether or not your cycling computer is up to the job. That said it's still a great way to spend an afternoon!

An easier option would be to let us talk you through some of the available options. 'Garmin' might be close to becoming a synonym for GPS in the same way that 'Hoover' nearly came

to mean vacuum, but depending on what you're looking for there are still plenty of options on the market with their own attractions that could make them a better choice than a Garmin depending on your needs.

From basic units that'll simply log your rides to high-tech wonders that'll automatically capture maps of the territory through which you're travelling, here are four to consider.



THE GARMIN RIVAL

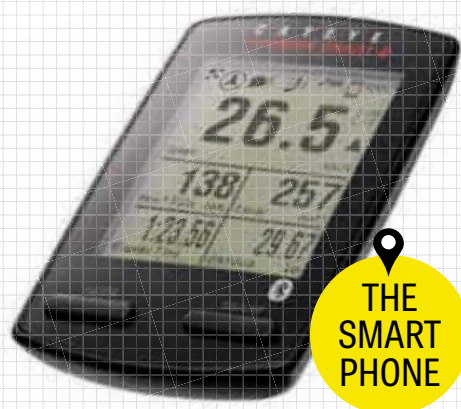
WAHOO ELEMNT

► Due to go on sale imminently, Wahoo's ELEMNT computer looks like a real threat to Garmin's dominance of GPS. Its crisp monochrome LCD display offers both data and mapping, and can display up to 10 customisable data fields, prioritised exactly as you want them, while still giving easy access to the whole dataset. It'll sync with third-party sensors via Bluetooth or ANT+, while set-up is most easily achieved via a

paired smartphone. Plan a route on Strava and it'll magically appear on the display, giving you a full live view map alongside other vital statistics, and it can pull in local maps when you're abroad. It'll even show you the location of your friends (if they have the same computer). The light-up bars that run along the edges can be allocated to particular metrics (such as heart rate) to help keep you within specific zones.

£280 wahoofitness.com

Three more to consider...



THE SMART PHONE

CATEYE PADRONE SMART TRIPLE WIRELESS KIT

► Many cyclists record rides using a phone and apps such as Strava but unless you're happy to lash your phone to the handlebars, and rinse its battery in the process, it'll usually stay hidden in a jersey pocket. Cateye's Padrone works as a heads-up display, channelling data from your smartphone and connected sensors – it comes with a heart-rate monitor and a speed/cadence sensor. It runs off a watch-style battery that lasts months, so there's no need to recharge the unit between uses.

£180 zyro.co.uk



THE TOUGH ONE

LEZYNE SUPER GPS CYCLE COMPUTER

► This tough little fella is built to take a beating with a machined aluminium body, serious weatherproofing and a battery that'll last for days of epic riding. Linked to both GPS and GLONASS, it's quick to locate satellites and less prone to cutting out. ANT+ and Bluetooth connectivity means it works with most accessories, and it'll pair with a smartphone to notify you of incoming calls – so you can decide if they're worth interrupting your ride for.

£160 upgradebikes.co.uk



THE GRAPHIC DISPLAY

POLAR M650

► When the M650 first hit the market, its lack of mapping left it feeling a little underpowered. A firmware update means it can now make use of freely available Open Source maps, though there's still no ANT+ connectivity so it only works with Bluetooth sensors. Two buttons and a pressure-sensitive touchscreen to control the unit and navigate between programmable data screens. The M650's party trick is its ability to generate graphs from the metrics it harvests – useful if you're keen to work in particular heart-rate zones. 🚴

£175 polar.com

SUPER SUNNIES

We took some of the latest eyewear out to see how spectacular these spectacles are

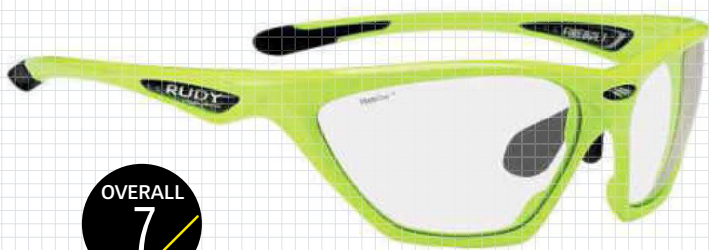


Spring is known for two things: Easter eggs and unpredictable weather. Easter eggs we can get on board with but the unpredictable weather can be a bit of

a hassle, especially if it's sunny one minute and dark the next. Thankfully, humanity invented photochromic sunglasses.

By using light-sensitive molecules, these sunglasses allow seamless transition from

dark to bright environments without having to change your specs. We tested eight pairs to see which ones could keep us from squinting and which ones would leave us looking like a scientist's lab assistant.



OVERALL
7
10

RUDY PROJECT FIREBOLT

▶ WHAT THE MAKERS SAY

Created for sportspeople who require enhanced protection from the sun's rays or from the elements in general, the ergonomic design and reactive lens make this perfect for any adventure.

▶ WHAT WE SAY

The bold frame design does well to distract you from a pair of lenses

that we found fairly slow to react to changing light conditions. With chunky framing, the Firebolt's field of vision is slightly more restrictive than some of the others on test but they do hold to your face very well. Rudy Project clearly had a robust mentality in place when designing these glasses – they feel solid and fit well, and look pretty cool, too.



£98



rudypproject.com



BikesEtc
BEST
VALUE

OVERALL
9
10

SPIUK VENTRIX LUMIRIS

▶ WHAT THE MAKERS SAY

With its extended arc shape, the Ventrrix is extremely enveloping and protective, making it a top choice for all types of competitors.

▶ WHAT WE SAY

Another confidently coloured pair of shades, the Spiuk Ventrrix offer a superb fit. Their arm hinges seem odd as they

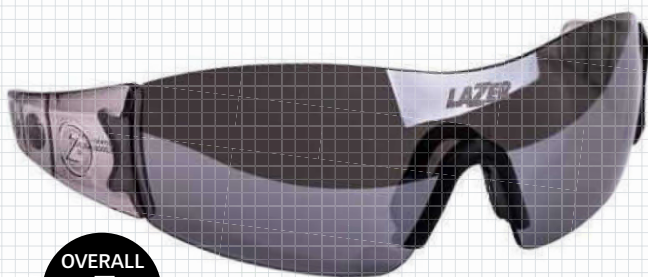
travel further around the temple but this means they sit smoothly against the head – closing the gap between head and glasses is a plus for marginal gainers. The reactivity of these category 0-2 glasses leaves a bit to be desired in brighter conditions but works well on dark, wintry rides. At the price, they give much bang for your buck.



£70



silverfish-uk.com



OVERALL
7
10

LAZER MAGNETO M1

▶ WHAT THE MAKERS SAY

Possibly the fastest-looking sunglasses in the world are now also the most innovative. With magnets embedded into the temples, these secure nicely to helmet straps so they don't fall off.

▶ WHAT WE SAY

A hot contender for 'Most likely to be worn by Bono', these are some

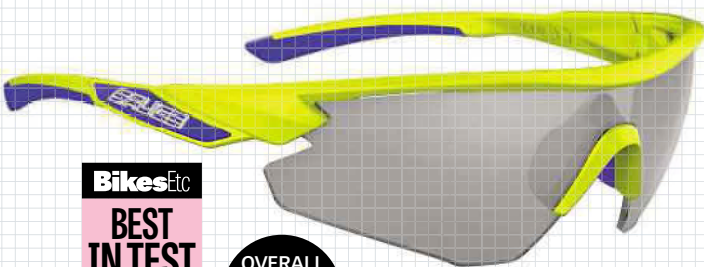
pretty innovative glasses – integrated magnets mean they can be fixed to your helmet straps instead of using the arms to hold them in place over your ears. It's a great idea, although we found the magnets a bit fiddly to use. They also benefit from fast-acting light-reactive lenses. With the cool looks and magnet innovation, they're an interesting option.



£100



madison.co.uk



BikesEtc
BEST
IN TEST

OVERALL
9
10

SALICE 012 CRX

▶ WHAT THE MAKERS SAY

A lightweight, streamlined glass with wide panoramic vision integrated with frontal air ventilation. These glasses use a multi-layer mirror coating that cuts glare and increases contrast.

▶ WHAT WE SAY

Bright, ostentatious and slick, you wouldn't expect anything less from the

Italian company and we love the style of these. A minimalist frame ensures a large field of vision while the category 1-3 photochromic lenses give a good range of protection. Fit is comfortable and secure, although they don't sit as flush against the forehead as some other models. Still, they look great and have a high-quality lens for the price.



£75



salice.co.uk

CEBE S'TRACK

▶ WHAT THE MAKERS SAY

The S'Track revolutionises the concept of one-sided stability. Ultra-technical, super-ventilated and ultra-stable.

▶ WHAT WE SAY

The 'Symbiotech' technology that sees these pretty eyepieces sit atop your face was developed in partnership with mountain bike riders. It shows: the fit and comfort of these specs were marvellous. Coupled with the grippy nose bridge, it meant these were going nowhere even on the roughest roads. The lenses adapt to conditions adequately, transmitting a claimed 11% to 45% of light. While the fit and robustness are comforting, they are a bit lacking in style.



OVERALL
7
10

 £90

 cebe-eyewear.co.uk

Photochromic lenses allow transition from dark to bright environments without changing your specs

JULBO AERO

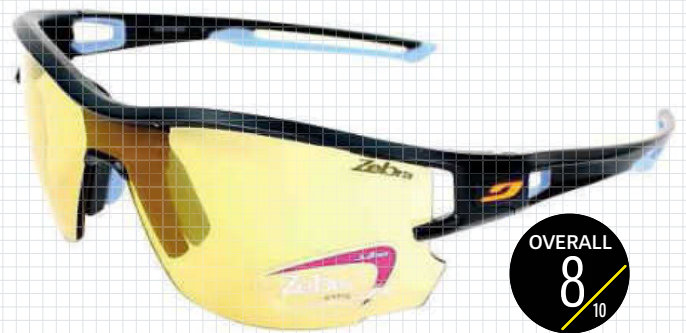
▶ WHAT THE MAKERS SAY

The slightly suspended lenses partnered with the photochromic materials provide outstanding ventilation and a clear field of vision, even in the most intense situations.

▶ WHAT WE SAY

A solid pair of sunglasses using category 2-4 protection, making them

perfect for those rare times when Britain gets incredibly bright in spring. However, they can also adapt for when you stay out longer than the sun does. Finishing up with a matt blue, these glasses will certainly help you to keep a cool head. For the price, you expect a lot from these glasses and they certainly deliver.



OVERALL
8
10

 £140  julbo.com

BBB SUMMIT

▶ WHAT THE MAKERS SAY

With a quick reacting and sensitive photochromic lens that can let as little as 17% of light in, the Summit model can handle any rapidly changing environment effortlessly.

▶ WHAT WE SAY

A supremely well fitting pair of glasses, the Summit reacts quickly to changing

environments, and the matt black finish is a favourite of ours. Winter and urban night riding in these are fun, as the category 0-3 lenses give the right amount of gradual tinting before forming adequate armour for light environments, though you'll want category 4 protection for very bright sunshine. Overall, a great set of specs.



OVERALL
8
10

 £120  windwave.co.uk


BOLLE 6TH SENSE

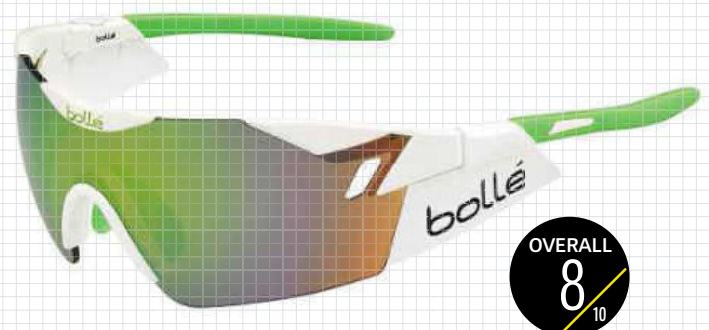
▶ WHAT THE MAKERS SAY

The ideal cyclist's glasses. Designed with speed in mind, the 6th Sense aims to give the edge with an optimised field of vision, adjustable lens and upper face protection, leaving you fully prepared to face any challenge on the road.

▶ WHAT WE SAY

Seriously aero glasses that look and

feel very pro, with their wraparound frame and removable aero fairings on the arms. The huge field of vision is great, too. The slim frame means navigating bends at high speeds is never a problem. The lenses do a good job of reacting to light but you're really buying these for the style and the aerodynamics. Expensive but worth it. 



OVERALL
8
10

 £155  bolle-europe.co.uk

WHEELS

A BUYER'S GUIDE

Whatever your budget, whatever your discipline, we'll help you find the perfect wheel



Having been continually refined since their invention in the late Neolithic-age, wheels have come a long way over the years and the range available to today's cyclist has never been better. One of our sport's big-ticket items, the right set can instantly and totally transform the performance of your bike. The downside of so much choice is trying to work out what wheelset is best for you. We've taken a look some of the options available and enlisted the help of a pro-team mechanic (see page 81) to get the skinny on how to choose the best set to suit your style of riding, whatever your budget.

CARBON

Carbon might be a wonder material but don't expect carbon wheels to be much lighter than their aluminium counterparts. What they should be is stiffer and more aerodynamic.

SPOKE COUNT

Fewer spokes means lower weight, and as long as they're cleverly deployed, a lower spoke count needn't equal lots of flex. That said, more spokes add up to a wheel that's easier to adjust, and should a spoke snap, you'll still be able to roll home on them.

AERO

Despite being heavy, deep-section wheels are faster in most situations, including uphill. That's because they lose less momentum to aerodynamic resistance. Beware crosswinds – they can make deep wheels hard to control.

TUBULAR VS CLINCHER

Pros still use tubular tyres rather than easily swappable clinchers because the hooks that keep the tyres in place on clinchers add weight. Clincher tyres are also more susceptible to damage from the high temperatures generated by braking on carbon rims.

TIME TRIAL



FASTFORWARD TIME TRIAL WHEELSET

► Dedicated time-trial wheels like these represent the nicest of the niche. Designed solely for going fast in a straight line, they'll struggle to navigate even slight bends in the road, are lethal in crosswinds and are prohibited in everything but solo

events like time-trials or triathlons. But boy, do they go like stink! With no spokes to generate drag, once up to speed they're super-efficient. They also make a noise like a Harrier jet as they roll past, which is almost worth the pricetag by itself.



£2,600



paligap.cc

LIGHTWEIGHT

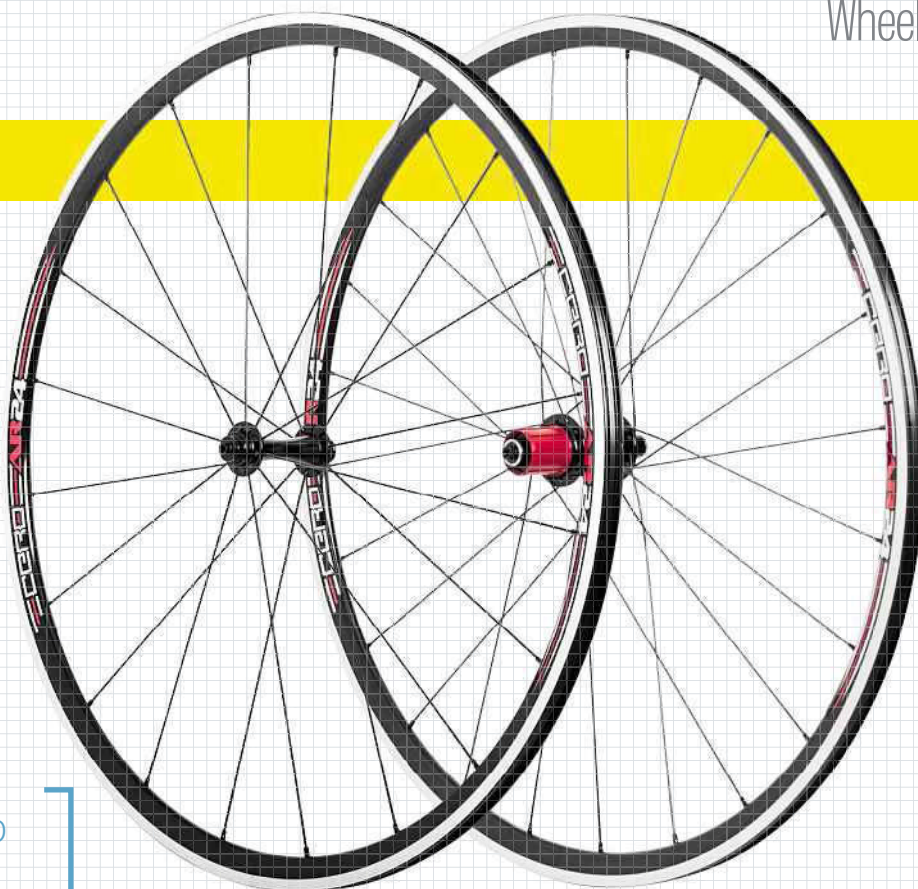
CERO AR24

► Not a lot of money for not a lot of wheel. Weighing a scant 1,570g, their narrow rim design may be a little old-school but luckily the laws of physics don't change as quickly as cycling trends. Lightweight wheels always accelerate with a minimum of effort. Considering that the wheels on an entry-level road bike often weigh in excess of 2kg, swap in these, along with a set of decent tyres and you'll radically change the feel and performance of your bicycle.

 £185

 cycledivision.co.uk

Lighter wheels get up to speed very quickly

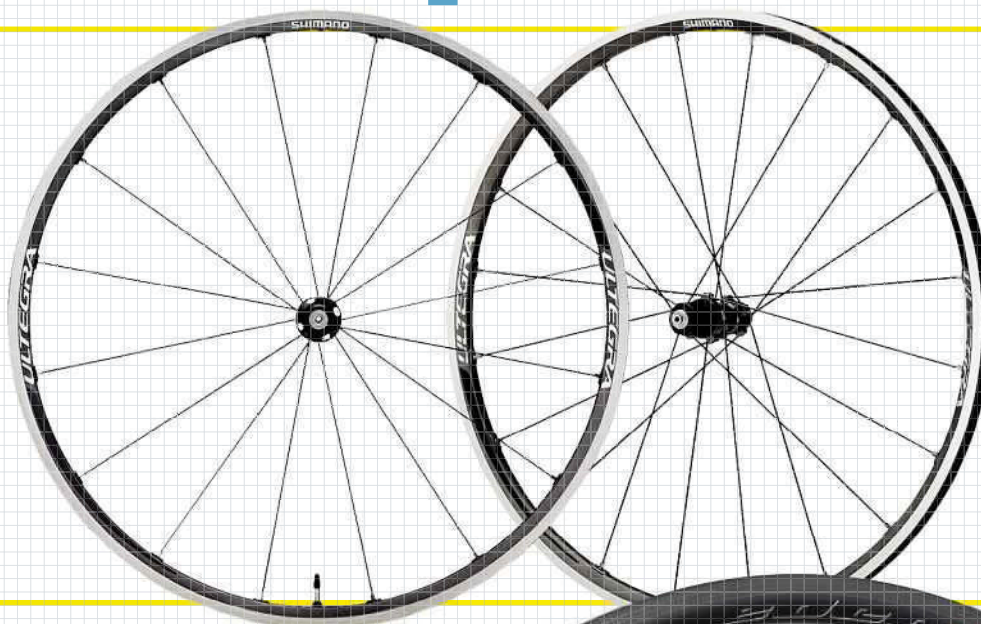


SHIMANO WH-6800 ULTEGRA

► As a total package, these wheels might not be the very lightest, being about 100g heavier than the Cero AR24 (above), but a lot of their mass is made up of the hubs, which being Shimano are typically indestructible. Fortunately, like a black hole, the weight is all located in the centre, meaning the lightweight aluminium and carbon-fibre laminate rims are free to spin at maximum velocity.

 £400


 madison.co.uk



EDCO PROSPORT JULIER

► Pro-level climber's wheels like the Julier, with a claimed weight of 1,355g, are rare beasts. Seldom seen in the wild, they only break cover when the parcours heads straight up from the gun, or when the race is likely to be decided solely on the final climb. This is because even on mountainous courses, more aerodynamically efficient but heavier deep-section wheels offer greater performance benefits than lighter, lower-profile alternatives.

 £1,299

 edco-wheels.co.uk



AERO

COSINE 55MM FULL CARBON

► One of the cheapest full-carbon wheels, these are perfect for finding out what the aero-carbon hype is about without having to sell a kidney. Fairly heavy at a claimed 1,752g, weight is far from the whole story when it comes to this type of wheel. Running both wide and deep, their improved aerodynamics will tear through the breeze once up to speed. Being stiffer, they should also get moving with a minimum of exertion being lost to flex.

£600

wiggle.com

Stiffer wheels accelerate with minimal energy loss



ROLF PRIMA ARES 4 ES

► Having tested a pair of these in time-trials, we can attest to them being a seriously nice set of wheels. Their 44mm-deep rims are boxy, in keeping with the latest thinking on aerodynamics, and poised on a slim handful of 16 spokes per wheel, they're nevertheless as inflexible as the most obstinate teenager. A skinny front hub is balanced by an oversized and asymmetric rear, giving a distinctive spidery look.

£1,500

rolfprima.com

NOVATEC THIRTY

► Novatec is one of the world's biggest manufacturers of original equipment (OE) wheels, so you probably see them roll past every day without realising it. Over the past couple of years, the firm has been putting its expertise to good use and releasing products under its own banner, like these 30mm-deep tubeless-ready wheels. With minimal spokes and an aero profile, they should provide any budget bike with a shot in the arm when it comes to speed and acceleration.

£149

extrauk.co.uk



HAND-BUILT

JRA JAWBONE LITE

► These high-tech hand-builts are fully customisable to suit any axle or brake standard you can dream up. Seen here in a fairly conventional guise with 9mm quick-releases and a braking track on the rim, they still boast low-weight tubeless compatibility. There's a lot to be said for using traditional J-bend spokes and Sapim's CX-rays are some of the best around. If you do snap one, almost any bike shop should be able to slot in a replacement with a minimum of hassle.

 £380

 justridingalong.com



ROLLING WITH THE PROS

Keith Hicks, race mechanic for ONE Pro Cycling, on how the team choose their race day hoops



'At ONE Pro Cycling, we've three race options, all made by [artisan wheel-builder] Black Inc – Thirty, Fifty and

Eighty. The names are related to the depth of the rims. For daily use and training, the riders also use a more basic aluminium wheel.

'On race day, the riders and Sports Directors take a number of factors into consideration when deciding which wheels to use, including the type of course and the weather conditions.

'We generally use a lighter, lower-profile rim for very hilly days, as this gives the climbers an advantage over using the deeper wheels. If it's fast, flat and with no wind, we go for the deepest available.


'We've just come back from the Dubai Tour where some riders



decided to use Eighty in the front and rear due to the fast nature of the stages. The advantage of deeper-section wheels is increased aerodynamics – they roll faster and retain speed better. Conversely, they're ever so slightly heavier and harder to handle in windy conditions.

'Others preferred the to use

a mixed option, with Eighty in the rear and Fifty in the front as this helps them with handling in windy conditions. During the Herald Sun Tour, on Stage 4 the peloton had to tackle Arthur's Seat. Most of the team went with the Thirty front and back as weight is crucial on such a hilly stage.

'In general, most of the guys go for the Fifty as they're a very fast and deep wheel, but you don't have the worries of the wind like you would on the Eighty, which means the riders are very confident on them. 

RACE WHEELS



Black Inc Thirty
£1,652, biwheels.com



Black Inc Fifty
£1,652



Black Inc Eighty
£1,693

'If it's fast, flat and with no wind, we go for the deepest wheels'

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*Report by the Committee on the Medical Effects of Air Pollutants in 2008. ISBN 978-0-85951-685-3

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REVIEW

THE BIG BIKE TEST

THIS MONTH

Steel road bikes

Modern metal bikes from racy contenders to versatile all-rounders

WORDS JOSEPH DELVES

LThe first bikes to ever roll off a production line were made of steel. It's the material that kick-started the industrial revolution and gave birth to the modern age. But in an era of space travel and smartphones, why would you want a bike made from a material that's heavy, difficult to fashion and susceptible to rust? Well, there are plenty of cyclists out there with a confirmed love of ferrous bicycles and they'll tell you that the ride of a steel bike just can't be matched by any modern material, however wondrous the technology or marketing pitch.

And yet, steel isn't just for luddites and bearded, craft-ale drinkers. Steel bikes can be strong, comfy, resistant to damage and, with care, ought to last a lifetime. That said, there are an equal number of heavy and boring steel lumps out there. We tried four bikes in the £1,400-1,600 price bracket, ranging from the traditional to the adventurous, in the hope that they'd fall into the former camp...

BIKES ON TEST



GENESIS
EQUILIBRIUM
DISC 20
£1,550



SOMA
SMOOTHIE
£1,499



BOMBTRACK
TEMPEST
£1,580



THE LIGHT
BLUE
WOLFSON
105 £1,400

Genesis Equilibrium Disc 20 **£1,550**

Popular and versatile all-rounder, now with disc brakes



About the Bike

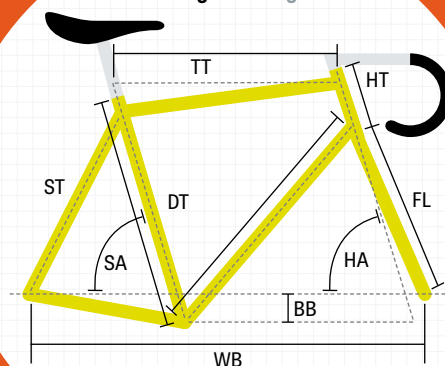
Brit brand Genesis has a reputation for clever, unfussy design and its Equilibrium range has developed a strong following over the years. While the cheaper models still feature rim brakes, the upper end of the range recently switched to discs. This necessitated a redesign, with the whole bike getting beefed up. It now also rolls on high-volume tyres, reinforcing the idea that it's a bike that's up for anything. All of this has added a fair chunk of weight, so we're keen to see if new Equilibrium retains the charm of its predecessors.



GEOMETRY

	Claimed	Measured			
			Head tube (HT)	170mm	170mm
Top tube (TT)	559mm	560mm	Head angle (HA)	73.0°	73.0°
Seat tube (ST)	530mm	532mm	Seat angle (SA)	73.5°	73.8°
Down tube (DT)	N/A	632mm	Wheelbase (WB)	1,003mm	995mm
Fork length (FL)	N/A	385mm	BB drop (BB)	72mm	69mm

Size tested 56
Weight 10.13kg





SPEC

FRAME

Reynolds 725 Heat-Treated steel, tapered carbon road disc fork

GROUPSET

Shimano 105 5800, 11-speed

BRAKES

TRP Hy/Rd

CHAINSET

Shimano 105 5800, 50/34

CASSETTE

Shimano CS-5800, 11-28

BARS

Genesis Road Compact

STEM

Genesis Road

SADDLE

Genesis Road Race

SEATPOST

Genesis

WHEELS

Fulcrum Racing Sport DB

TYRES

Challenge Paris-Roubaix CL Plus, 27c

CONTACT

genesisbikes.co.uk

The ride

First Impression: A little slow to get underway, it's instantly obvious that this bike stands slightly apart from more conventional steel road models. However, once reconciled to the fact that it isn't likely to win any finish-line sprints, we were won over by the Equilibrium's strengths in other areas, particularly the liberating sensation of being able to steamroller through mixed terrain.

On the road: On smooth tarmac, the Genesis is

comfortable and composed. It would make a great fast tourer or commute bike, although it'd be a stretch to call it exciting when applied to traditional road duties. Moderate frame weight, robust wheels and wide tyres even out inconsistencies in the road but make getting up to speed an unhurried affair. Realistically, the extra weight won't put you at a significant disadvantage on the average club ride, but it does mean climbing and sprinting won't feel

quite as rewarding as on something lighter. Thankfully, once you reach cruising speed, little effort is required to keep the bike there, partly due to the semi-aero wheels. On canal towpaths or unmade roads that extra brawn comes into its own. The oversize tubing, burly tapered head tube and matching fork mean it tracks purposefully, while the steel construction and bulbous tyres stop it chattering over the bumps. ➔



The Equilibrium 20 uses TRP's hybrid Hy/Rd brakes – cable-actuated hydraulic callipers

Handling: None of the Equilibrium's vital numbers are too far removed from regular road geometry. The 73-degree head angle and relatively lengthy chainstays mean handling is predictable, and with a bit of extra weight in the form of panniers, or when rattling along over bumpier surfaces, the added stability is very welcome. It's also in these situations that the stiffness of the fork and wheels becomes noticeable, making it easy to muscle the bike out of sketchy situations or back into line if it starts sliding. The Equilibrium is a tough creature and more than happy being bunny-hopped over the odd sleeping policeman or pothole.

The spec


Frameset: Genesis uses its own brand Mjölir steel in producing the Equilibrium. It's cold drawn, 4130 chromoly that's double butted to save weight. Genesis bills it as a like-for-like replacement of the better-known Reynolds 520 tubing, and with the firm's long history of working with steel – its pro team raced on steel bikes until recently – it's no surprise that the Equilibrium crams in plenty of clever technology. The complex cast dropouts that support the brakes are particularly neat. The tubes themselves are much wider than on the other bikes on test, and combined with the tapered head tube it adds up to a frame that would require stronger arms or legs that we possess to set it twanging. At no point did we find ourselves wishing for the added stiffness afforded by bolt-thru axles and instead were happy to be able to readily whip out the wheels. There's also plenty of space for mudguards and racks should you wish to fit them.

Groupset: The 105 groupset puts the Genesis on a level pegging with every other bike on test. The compact chainset and 11-28 cassette make sense on a versatile bike like this, giving plenty of scope to winch up even the steepest hills. While the shift levers are mechanical, the brake callipers are TRP's hybrid cable/hydraulic system. Power is up with the best fully mechanical systems but lags slightly behind purely hydraulic alternatives, and the braking feel is also a little less direct. There's also the minor issue of servicing and the fact that they're kind of ugly.

Finishing kit: The unbranded black finishing kit is workmanlike. We liked the shallow bars, which encourage



you to get on the drops regularly, and both bars and stem are plenty stiff enough. The single-bolt seatpost is a bit clunky and we would have appreciated the security of a two-bolt design, especially on a bike that's designed for riding on rougher surfaces.

Wheels: Fulcrum's Racing Sport DB wheels are in keeping with the rest of the build. They're strong and – being designed for the muddy rigours of cyclocross – unlikely to succumb easily to winter conditions. The Challenge Paris-Roubaix tyres are more voluminous than their 27c width would suggest. They're game for adventure and with the pressure dropped a little, they'll eat up gravel tracks or even light off-road expeditions. Despite their width, they are still legitimately light, meaning there's little to be gained by swapping to anything narrower anyway. Doing so would be playing against type. 



RATING

FRAME

A good mix of comfort and stiffness, but a tad sedate

COMPONENTS

Great 105 groupset and workmanlike finishing kit

WHEELS

Solid wheels and decent tyres, ready for adventure

THE RIDE

Versatile and comfortable but not the fastest

OVERALL

7.7

10



Large volume tyres on strong Fulcrum wheels (above) are a great go-anywhere combination; brass inline cable adjusters (right) are a nice touch



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Soma Smoothie £1,499

A custom build that lives up to its name



About the Bike

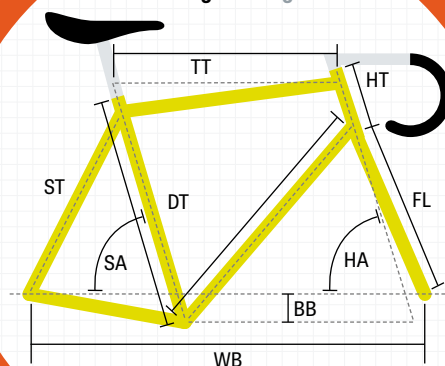
Soma is a small brand based in San Francisco. Its philosophy echoes the area's hippie values and it claims to make products for everyday cyclists, not just those wanting to ape the pros. The Smoothie is its road race frame, but it still offers mudguard and rack mounts, boosting its versatility. We were keen to find out if practicality and excitement are mutually exclusive or whether a bike can really provide both. It's also absolutely, mid-70s Stevie Nicks-level gorgeous. Not that we are liable to be swayed by something so superficial...

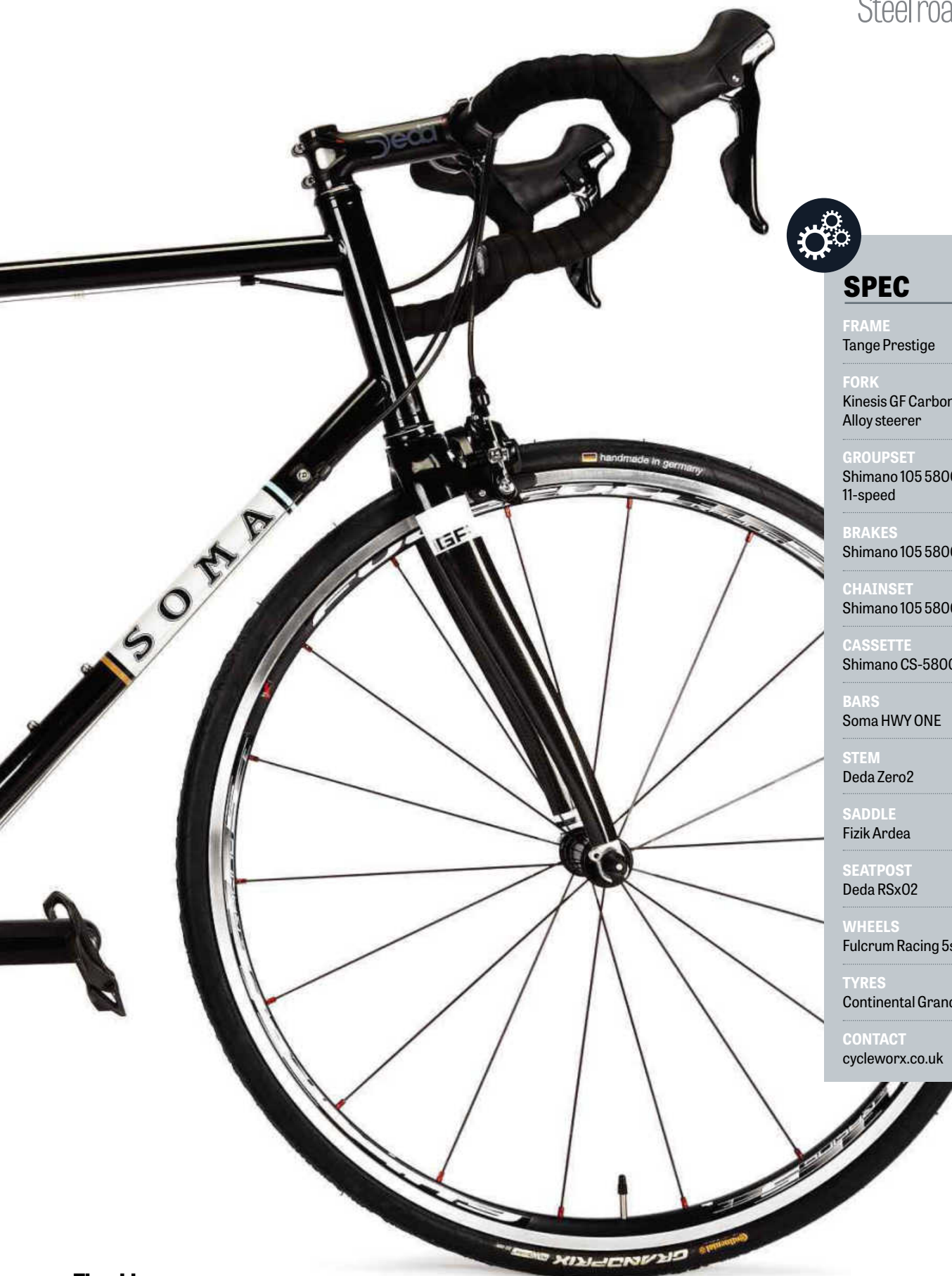


GEOMETRY

	Claimed	Measured			
Top tube (TT)	570mm	575mm	Head tube (HT)	172mm	195mm
Seat tube (ST)	550mm	570mm	Head angle (HA)	73.5°	73.0°
Down tube (DT)	N/A	635mm	Seat angle (SA)	73.0°	73.0°
Fork length (FL)	N/A	375mm	Wheelbase (WB)	993mm	985mm
			BB drop (BB)	70mm	68mm

Size tested 58cm
Weight 9.21kg





SPEC

FRAME

Tange Prestige

FORK

Kinesis GF Carbon with Alloy steerer

GROUPSET

Shimano 105 5800
11-speed

BRAKES

Shimano 105 5800

CHAINSET

Shimano 105 5800, 50/34

CASSETTE

Shimano CS-5800, 11-28

BARS

Soma HWY ONE

STEM

Deda Zero2

SADDLE

Fizik Ardea

SEATPOST

Deda RSx02

WHEELS

Fulcrum Racing 5s

TYRES

Continental Grand Prix GT

CONTACT

cycleworx.co.uk

The ride

First Impression: It's hard not to warm to a bike when it looks this good. Luckily, even if it were pug-ugly the Soma would still endear itself with a ride that is, as its name suggests, extremely smooth.

On the road: Tange tubing might not have the reputation of Reynolds or Columbus but the scales show that the Soma is no heavyweight. This lack of bulk is obvious in the way it gets up to speed. The skinny tubes led us to suspect it might be on the

flexy side. However, the back end, which comes into play when pedalling hard, is fairly unbending. The front is more flexible side-to-side, although this only becomes noticeable when sprinting and even then not really to an annoying degree. The wheels and tyres are also a winning combo, gaining speed with little effort, and maintaining it thanks to a moderately aero profile. They twin with the frame to bring out the best in each other. Anything flexier,

like the heavy, 32-spoke traditional hand-builds that often grace this kind of bicycle, would have robbed the Soma of some of its purposefulness. As it is, the wheels easily make up for the slight flex in the frame, allowing you to enjoy the comfort provided by its skinny tubes without ever feeling at a disadvantage when pushing a little harder.

Handling: The geometry, based around matching 73-degree seat and head tubes, throws up no ➔



Touches like the integrated seat clamp just add to the Smoothie's retro appeal

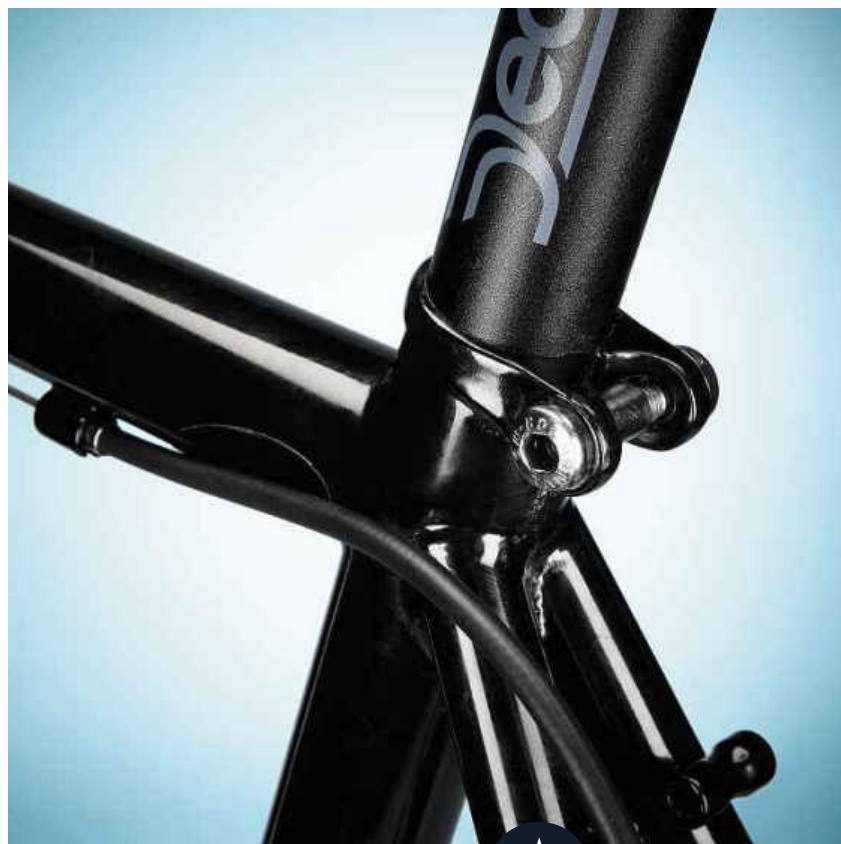
surprises. Not too slack, not too flighty, just right. The head tube is moderately tall, so the default position is more suited to long hours in the saddle than smashing out hot laps. The frame does a fantastic job of drowning out the chatter, making pockmarked roads feel more like freshly-laid tarmac and is definitely the most comfortable on test.

The spec


Frameset: With its horizontal, non-compact, geometry and traditional round-tube profiles the Soma looks resolutely retro. The upper part of the head tube itself protrudes a centimetre or so higher than you would expect above the top tube. Housing a very slim headset, the whole grouping has an agreeably slender appearance. This design allows the frame to retain its handsome looks without sacrificing too much stand-over height or having to employ an impractically low front end. Otherwise there's little to mark this fame out as much different from one coming from the era of old-school quill stems and 14-23 freehubs. Unlike the other bikes on test, there's no replaceable drop out, which means if you mangle the derailleur hanger you'll need a frame builder to repair it. On the plus side, this is unlikely and means the possibility of it getting damaged in the first place is far lower than with a replaceable type. The seat collar is also integrated into the frame, which in practical terms is neither here nor there, but it looks great. Out back there's plenty of space for wider tyres or mudguards, along with rack mounts. Our test bike came with a Kinesis carbon fork featuring a medium amount of clearance. A matching steel number is also available – fitting it will boost durability and tyre clearance but also add weight.

Groupset: Complete Shimano 105, so no quibbles here. Being a custom build, you'll be able to specify a compact, traditional or pro-compact chainset, along with whatever block takes your fancy on the rear. The 50/34 and 11-28 ours came with seems a sensible choice.

Finishing kit: Like the Bombtrack, our test bike featured a high-quality seatpost and stem from Deda. By default, the Smoothie comes with Soma's Highway 1 bars. They're short and shallow, with a gentle curve. The Fizik Ardea saddle has more than average padding. Not that we had any particular desire to swap it, but should you wish to, it's unlikely to be



a problem as there's scope to change components when ordering. Cane Creek provided the headset for our build, a high-end model with an extremely low-profile upper. To get so low, and to save weight, it runs on Norglide bushings rather than bearings. These slippery discs are thin and light but tend to wear out much quicker. Either way, the general level of the finishing kit is impeccable.

Wheels: Fulcrum's Racing 5s are great wheels. Low weight combines with trustworthy durability. Their recently updated design now features a modern, wider rim. This should boost their already decent aerodynamics and means the Continental Grand Prix tyres they're fitted with end up looking even broader. These are nice enough to roll on, dishing out OK grip without creating noticeable drag. Even their wire beads, which add about 50g per hoop, don't slow down the inherently nippy wheels. 

RATING

FRAME

Resolutely retro looking, apart from the carbon fork

COMPONENTS

Flawless 105 and some of our favourite finishing kit

WHEELS

Excellent Fulcrum wheels and decent Conti tyres

THE RIDE

Lives up to its name, ironing out rough surfaces

OVERALL

8.5
10



Impeccable finishing kit includes high-quality Deda components (above), while wheels (right) are light yet durable Fulcrum Racing 5s



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About the Bike

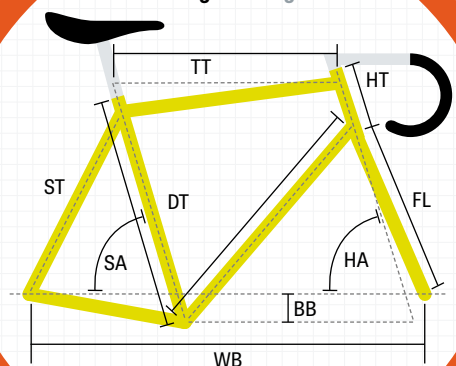
Bombtrack is a bike company with an emphasis on fun and adventure, and the Tempest might be its most conventional bicycle. With no funny tube shapes and a classy metallic paintjob, the frame has a timeless look, while the oversized bottom-bracket shell suggests its designers haven't just been looking backwards for inspiration. While others scrimp on finishing kit, we were very happy to see Deda RHM bars and a Fabric saddle. Hopping aboard the Tempest, at least we knew our hands and sit bones would be well looked after...



GEOMETRY

	Claimed	Measured			
Top tube (TT)	560mm	560mm	Head tube (HT)	N/A	145mm
Seat tube (ST)	530mm	535mm	Head angle (HA)	71.0°	73.0°
Down tube (DT)	N/A	630mm	Seat angle (SA)	73.0°	73.6°
Fork length (FL)	N/A	372mm	Wheelbase (WB)	N/A	990mm
			BB drop (BB)	72mm	72mm

Size tested M
Weight 9.26kg





SPEC

FRAME

Reynolds 725, PressFit 86 BB, Tempest carbon fork with alloy steerer

GROUPSET

Shimano 105 5800, 11-speed

BRAKES

Shimano 105 5800

CHAINSET

Shimano 105 5800, 52/36

CASSETTE

Shimano 105 5800, 11-28

BARS

Deda Zero2

STEM

Deda Zero2 6061 Alloy

SADDLE

Fabric Scoop CrMo Rails

SEATPOST

Deda RSX01 Alloy

WHEELS

Mavic Ksyrium

TYRES

Continental Grand Sport Race, 25c

CONTACT

bombtrack.com

The ride

First Impression: A first spin of the legs suggests the Tempest will be an exciting but reliable partner for racking up some miles. Despite medium weight, acceleration is nippier than expected thanks to a relatively stiff frame. The wheels also play to the same tune, being tauter than average. As the bike's vital statistics would suggest, it's quite lively.

On the road: It's quickly obvious that there isn't much stodge to this steel beastie. Jumping on the

pedals or heaving on the bars doesn't result in any distracting flex across the frame. The stiffness means that the middling weight never feels burdensome. Depending on how you set it up, the low front end also provides the impetus to dig-in rather than sit up. The steel frame isn't the most forgiving – it does a fair job of dampening buzz from the road surface, but clatter into a pothole and your wrists and posterior will know about it.

Handling: Despite the head angle being listed as a fairly slack 71 degrees, the Tempest doesn't feel too reluctant to swing across the corners – we measured it at 73 degrees, which perhaps explains that. With a stubby head tube of just 145mm, our initial ambitions to slam down the stem for a fully-pro look were thwarted. Instead, in order to get a comfy position we ended up running it somewhere around half-mast. This will please ➔



The oversized bottom bracket shell is a modern touch on an otherwise classic-looking bike

riders with pretensions of speed although users after a more upright position will probably end up with a good few spacers under the stem. Luckily, there are 3cm worth of them to shuffle around. Our size medium included a fairly rangy 110mm stem and broad 44cm bars. We're fans of wide bars – they greatly improve control and add stability, so are a good fit with the Tempest's general disposition. Riders who prefer narrower bars or have more slender shoulders might want to swap them out though.

The spec


Frameset: Reynold's 725 sits towards the middle of the Birmingham-based tubing manufacturer's steel hierarchy. Heat-treating allows its metallurgists to draw out thinner tubes than would be possible with cheaper steels, making for lower weight and enhanced dampening. While skinny-looking compared to an aluminium or carbon alternative, by steel standards the Tempest's down tube is fairly large. Ending up at the oversize bottom bracket shell, the brawniness of the whole assembly keeps everything immobile. The investment-cast dropouts look great and contribute to a solid back end. The drive-side houses a replaceable hanger, so any accidents with the gearing shouldn't result in damage to the frame itself. In keeping with its head-down, tongue-out character, the Tempest does without the mounts or clearance needed for mudguards, limiting its appeal as commuter or fast tourer. Unsurprisingly, and in common with the other bikes, all the cabling is external, which will make anyone who works on their own bike happy. The Bombtrack's stops are neatly brazed onto the down tube rather than bolted on.

Groupset: Shimano's 11-speed 105 groupset is all present and correct, with the forgivable exception of the KMC chain. We were particularly happy to see the brakes, as their excellent SLR-EV design, which increases leverage, makes them as powerful as any you'll find. The 11-28 cassette has good range and small jumps, while the pro-compact 52/36 chainset plays up the bike's racy credentials.

Finishing kit: All of the contact points are suitably tactile, from the saddle to the hard-wearing and great-looking perforated bar tape. Deda makes some great kit and a lot of it is bolted to the Tempest. Wider than normal on a medium



frame, the 44cm RHM handlebars are easy to navigate around while being pleasingly chunky in the hand. The Fabric Scoop achieved the rare distinction of being a hit with every rider that perched on it in our recent saddles test. Even the headset is from a recognisable quality brand.

Wheels: Mavic's Ksyrium wheels are well proven. Rigid and eminently durable, even the roughest local bike shops are likely to have spares for them in a drawer somewhere. What they aren't, however, is light – something which is exacerbated by the wire-bead Continental tyres. Swapping these would be a good first upgrade as although not bad, they stand out as one component that could be easily improved. Coming in a crowd-pleasing 25mm width, they offer acceptable grip and puncture resistance, though their bulk makes them a little slow to get moving. Luckily, the stiffness of the wheels goes a long way to offsetting this. 



RATING

FRAME

The only disappointment is a lack of mudguard mounts

COMPONENTS

Great Deda finishing kit, especially the wide bars

WHEELS

Mavic Ksyriums are reliable if a little heavy

THE RIDE

Rigid, pretty nippy and lots of fun to ride

OVERALL

7.9
10



The 11-28 cassette (above) provides a good all-round range; external cabling and neatly brazed stops (right) are in keeping with the retro looks



Much livelier than it looks on paper, the Tempest is a fun ride with sharp, quick handling

dirt wash

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About the Bike

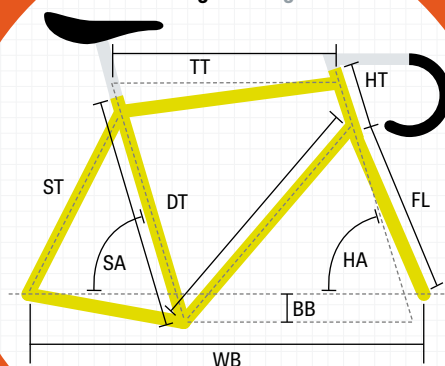
The Light Blue built its first bike in Cambridge in 1895 and the Wolfson is the reinvigorated marque's new flagship racer. A glance at the simple tubing profiles, external BB and headset might suggest something old fashioned but popping it into the stand, the sloping geometry, skinny seatstays and low weight had us betting that a racy temperament lurked beneath. And for unashamed steel geeks like us, the yellow and green Reynolds 853 tubing sticker was enough to spark a squabble over who was going to get the first spin.



GEOMETRY

	Claimed	Measured			
			Head tube (HT)	160mm	160mm
Top tube (TT)	572mm	565mm	Head angle (HA)	72.5°	72.8°
Seat tube (ST)	520mm	520mm	Seat angle (SA)	73.0°	73.0°
Down tube (DT)	N/A	635mm	Wheelbase (WB)	1,008mm	1,000mm
Fork length (FL)	N/A	372mm	BB drop (BB)	72mm	74mm

Size tested 56
Weight 8.83kg





SPEC

FRAME

Tig Welded Reynolds 853 Steel, carbon fork with alloy steerer

GROUPSET

Shimano 105 5800, 11-speed

BRAKES

Tektro Quartz

CHAINSET

Shimano 105 5800, 50/34

CASSETTE

Shimano 105 5800, 11-28

BARS

Genetic Creed

STEM

Genetic SLR

SADDLE

Gusset Blackjack

SEATPOST

Genetic Syngenic

WHEELS

Halo Evaura

TYRES

Schwalbe Durano, 25c

CONTACT

thelightblue.co.uk

The ride

First Impression: Within moments of rolling off, the fabled steel ride quality that's liable to get bearded men eulogising is fully evident. It's quick to get going and provides decent feedback from the terrain rather than feeling leaden and inert.

On the road: Minimal weight attached to the frame, and wheels mean there's little to hamper the bike's onwards progress. While not as stiff as a carbon or aluminium alternatives, there's no sense of being

robbed of any momentum due to flex either. While even basic steel frames will normally be able to deaden imperfections in the road surface, the really good ones feel as if they're working slightly differently. This frame slots into that second category. Zinging along, it doesn't feel heavy or dead as beefier ferrous bikes can, rather it takes the edge off vibrations generated by the road almost imperceptibly, leaving you less fatigued but

still with a good idea of what's going on beneath the tyres. Deliberately wrenching the bike about in order to test its elasticity, not only did we discover that there was little flex to expose, but also that we didn't really care either. The low weight and decent stiffness meant we were happy to bash uphill out of the saddle rather than adopt the sit-and-grind technique we resort to on weightier bikes. Schwalbe's excellent Durano tyres made us feel ➔



Halo Evaura are as light
a wheelset as you'll find
on a bike at this price

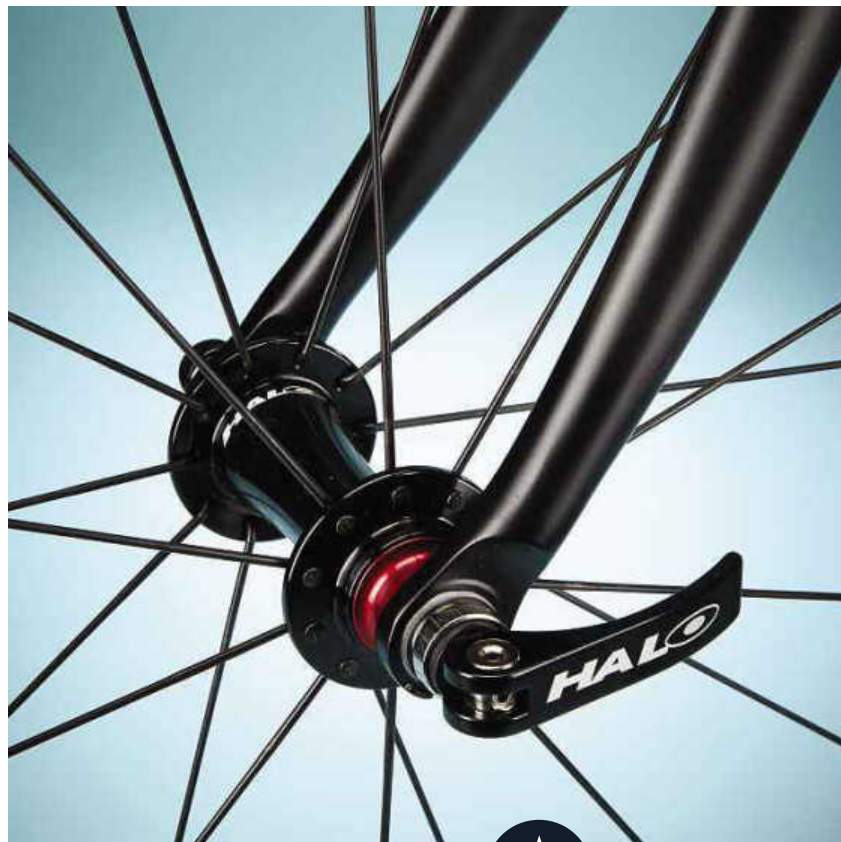
instantly at home. While the bike is happy being pushed relatively hard, sadly the same can't be said of the long-drop Tektro brakes. Economic necessity sees them take the place of Shimano's excellent stoppers and it's a shame because they definitely robbed us of some confidence, particularly while descending.

Handling: Moderately quick handling, courtesy of a head angle just south of 73 degrees, makes for fun times through the twisty bits. Riders used to super-rigid carbon bikes with oversized front ends might notice the merest of wobbles when adjusting trajectory mid corner, but there's nothing likely to startle the horses. The direct feel of the frame's acceleration when out of the saddle even had us toying with the idea of taking it racing. The flip side of this is that it's slightly less forgiving than the other bikes on test, although in the grand scheme of things, it's still a great place to spend a few hours. The front end strikes a happy medium height wise, so riders with halfway decent flexibility should be able to find their sweet spot, while anyone wanting to achieve a lower, racier position than the head tube allows have maybe gone wrong in buying a steel frame in the first place.

The spec

Frameset: Not all steel is created equal and Reynolds 853 lords it over more lowly alloys. Part of the reason is the 'air-hardening' process, which makes it tougher after heating. This allows builders to use thinner tubing for lower weight while retaining excellent fatigue resistance. With no oversized or bulging bits, the frame itself might not be much to look at but there's still plenty of thought gone into it. The down tube is subtly bi-ovalised to increase stiffness around the bottom bracket, while seatstays are whittled down to a minimum, and the join with the seat tube is particularly neat. Delicately integrated bosses on the inside of the fork legs and seatstays allow for the addition of mudguards without marring the bike's raffish looks. Snap on mounts for externally routed, full-length brake outers make for easy servicing and enhanced durability.

Groupset: The Shimano parts that make up the groupset are faultless; the sole misstep is the Tektro brakes which, although not bad, are streets behind their Shimano-made alternatives. Although the bike is nippy enough for a higher



geared pro-compact style chainset, in everyday use you're unlikely to ever find yourself spinning out the compact 50/34 it comes fitted with.

Finishing kit: The two-bolt seatpost is easy to adjust and will support even the portliest rider, though being inline, as opposed to layback, we did have to shunt the saddle backwards slightly to achieve our preferred position. The cheekily named Gusset Blackjack saddle has a civilised amount of padding, while the shallow-drop bars feature a gentle curve that will probably suit most riders.

Wheels: Halo's Evaura wheels weigh in at a smidgen over 1.5kg. Swaddled in Schwalbe's Durano tyres, they're as light a wheelset as you'll find on a bike at this price. Broad rims are on-trend and lend a pleasing radius to the tyres, which are both robust and grippy. Along with the frame, they're responsible for the Wolfson's racy disposition. 🚲



RATING

FRAME

A well-designed frame in superb Reynolds 853 steel

COMPONENTS

All good Shimano stuff, bar the brakes

WHEELS

Great lightweight wheels and fast, reliable tyres

THE RIDE

Zings along at speed and floats over the rough stuff

OVERALL

8.7

10



The Reynolds 853 sticker (above) is a steel-lover's dream; a discreet Union Jack logo (right) reinforces the bike's home-grown credentials



Stiff, lightweight and racy, the Wolfson blends performance and great value

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AND THE WINNER IS... Light Blue Wolfson 105

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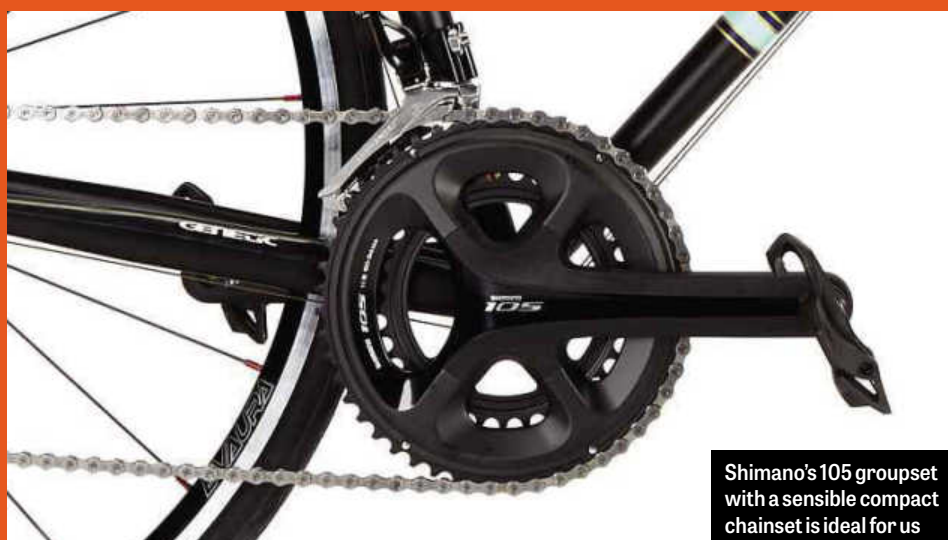
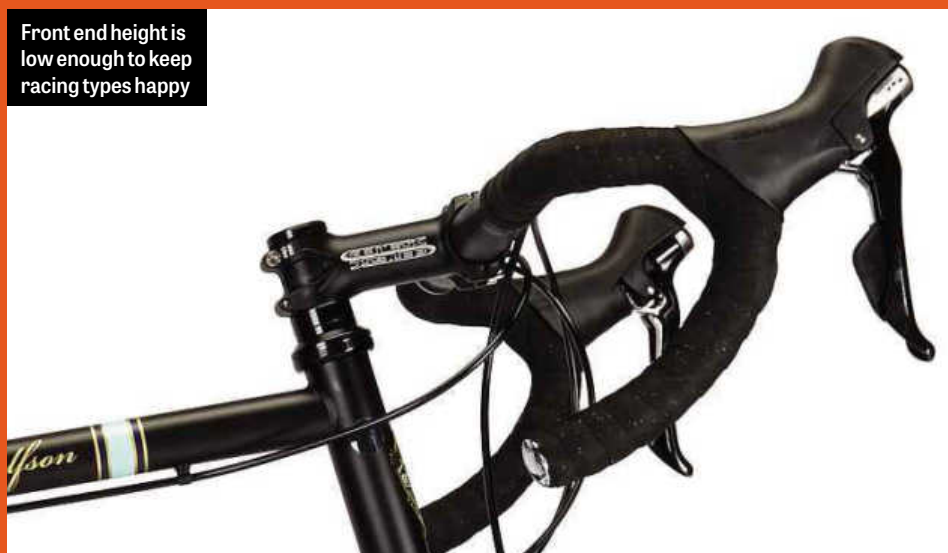
A Each of our four test bikes has a distinct personality and individual strengths, as well as a few slight weaknesses, but our winner is the one that put the biggest smile on our face. Nippy, springy and with low overall weight, particularly in the wheels, the Wolfson was fastest off the mark and stayed ahead of the pack in our affections all the way to the finish line. Every bike on test sported Shimano's 105 groupset, and the only minor mis-steps were when they swapped in different brakes – the TRP discs on the Genesis and the Tektro callipers on the Light Blue.

It's also easy to become enamoured with the Bombtrack. There's not much between it and the Light Blue in terms of speed. It's spec is faultless and it looks gorgeous, but with no mudguard clearance it lacks the grotty-weather versatility of the other bikes.

The custom-built Soma is a beautifully timeless-looking bike. The option to swap the parts to suit your own tastes is a real bonus, especially given the price. A bike for spinners, not mashers, it's not hugely stiff but emphatically lives up to its name in terms of ride quality while also being the second lightest on test. Its great Fulcrum wheels complement a ride that rolls effortlessly forward once up to speed.

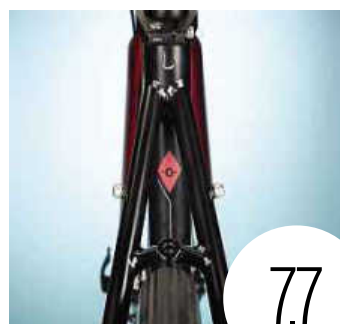
The Genesis is something of an outlier as the only disc-brake model on test. Its chunky build imbues it with additional resilience, making it ideal for excursions off the beaten track or for commuting in all weather. With easy mounting for racks and guards, it's very versatile. The flip-side is it's a little slow for general road duties. If you regularly find yourself hanging on to the back of the bunch, maybe go for something a bit more rapid. However if you're happy to ride at your own pace, the Genesis is comfy, versatile and planted. 

Front end height is low enough to keep racing types happy



Shimano's 105 groupset with a sensible compact chainset is ideal for us

How they stack up...



GENESIS EQUILIBRIUM
DISC 20 £1,550

FRAME



COMPONENTS



WHEELS



THE RIDE



7.7



SOMA SMOOTHIE
£1,499

FRAME



COMPONENTS



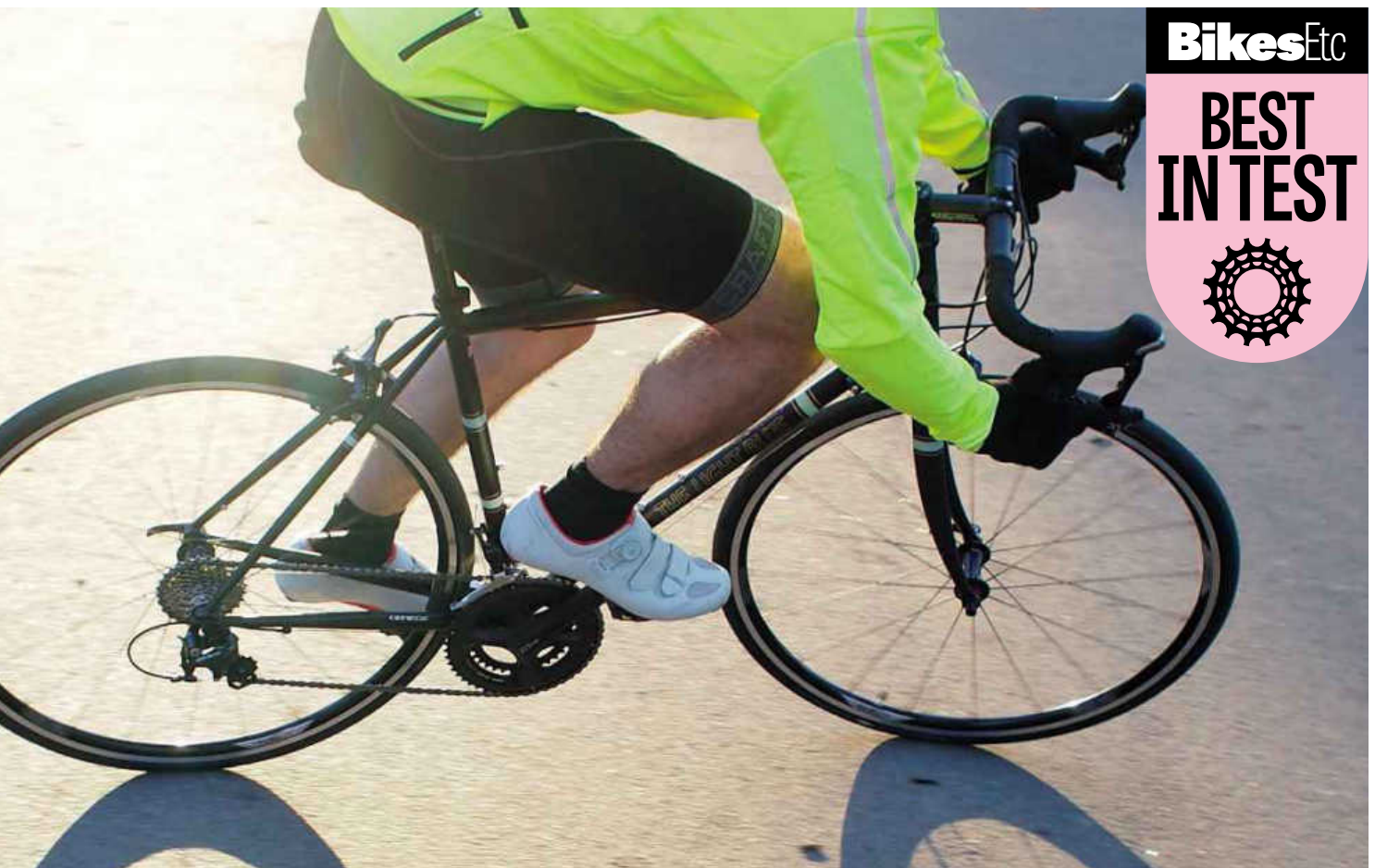
WHEELS



THE RIDE



8.5



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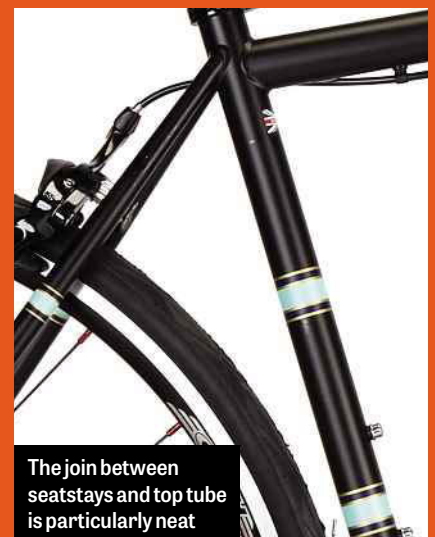
**BEST
IN TEST**



Ignore the name, the Gusset Blackjack is a decent saddle



Lightweight Halo wheels are an impressive option on a bike at this price



The join between seatstays and top tube is particularly neat



**BOMBTRACK
TEMPEST £1,580**

FRAME

COMPONENTS

WHEELS

THE RIDE

7.9



**THE LIGHT BLUE
WOLFSON 105 £1,400**

FRAME

COMPONENTS

WHEELS

THE RIDE

8.7

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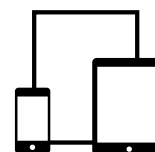
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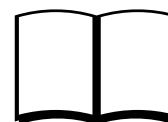


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Chapeau thermal bibtights, £90, chapeau.cc
GripGrab Insulator Long finger gloves, £30, wiggle.co.uk

ADVENTURE BIKES AHoy! p20

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dhh Aeron Jersey, £60, wiggle.com
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Winter bibtights, £100, wiggle.com
Giro Empire shoes, £230, zyro.co.uk
Lazer Z1 helmet + aeroshell, £200, madison.co.uk
Madison Road Race Thermal long-sleeve jersey, £75, madison.cc
Madison Road Race bibtights, £120, madison.co.uk
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Castelli Espresso 3 jacket, £230, castellilcafe.co.uk

Castelli Sorpasso bibtights, £140, castellilcafe.co.uk
Rapha Pro Team Shadow jersey, £220, rapha.cc
Rapha Pro Team Shadow bibshorts, £260, rapha.cc
Specialized Audax shoes, £200, specialized.com
La Passione Summer bibshorts, £85, lapassione.cc
Bontrager Classique shoes, £200, trek.com
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Craft Shield bibshorts, £114, craftsportswear.co.uk
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RIDE LIKE THE PROS

Geraint Thomas

The Welsh warrior is known for his strength and versatility. Here's how he does it

Known to many as 'G', Geraint Thomas is Team Sky's slogger, riding everything from the spring Classics to the Tour de France.

Thomas first burst onto the scene in 2004 when he won the junior Paris-Roubaix, besting future team-mate Ian Stannard. He then went on to win the scratch race at the Junior World Track Championships in the same year. His early promise then paid off big time in 2007 when he helped Team GB to gold in Team Pursuit at the World Championships.

With his gold on the track in the team pursuit at the Beijing Olympics in the following year, his progression to cycling superstardom was complete. His integration of track and road riding has seen him become one of the strongest riders in the peloton and has given him the versatility to thrive. This not only allows him to ride in the big stage and track races but also allows him scope to mix it with punchier rides like Paris-Roubaix.

FACT FILE

Name Geraint Thomas

Age 29

Rider Type All-rounder (road); Pursuitist (track)

Professional teams

2006 Recycling.co.uk;
2007-2009 Barloworld;
2010-Present Team Sky

Palmares 2007-2008, 2008-2009 Team Pursuit World Track Champs; Olympic Team Pursuit Champs 2008, 2012; Bayern-Rundfahrt 2011, 2014; Commonwealth Games Road race champs 2014; 2015 Volta ao Algarve; 2015 E3 Harelbeke

Stay disciplined

WHAT? Even top pros aren't immune to temptation. In 2005, aged 19, Thomas was lambasted by Team GB bosses Dave Brailsford and Shane Sutton for having too many beers while watching the Champions League final. 'I got torn to shreds. They gave me the worst possible punishment by banning me from the Five Valleys race in South Wales. I was gutted.'

HOW? The adage 'out of sight, out of mind' helps – avoid distractions like Facebook the day before a big ride. And tell others your goals – fear of social embarrassment is great motivation to stick to a goal you've committed to publicly.

Be energy smart

WHAT? Whether you're breaking away in a late attack to win a race like G's 2015 E3 Harelbeke victory or just staying in the game for a long period like his lead-out efforts in the tour, you need to be on top of your energy stores. 'As soon as you start to get hungry, it's too late,' Thomas says. 'Take on food and liquid little and often.'

HOW? According to Team Sky chef, Henrik Orre, Thomas and co typically take on 70-75g of carbohydrates every 30 minutes to prevent them from sinking into the red. You'll need less if you're riding at lower intensity but regular intake of small amounts means your body won't be wasting energy on digesting the food.

Spin out on climbs

WHAT? Being a key lieutenant for one of the best climbers in the World Tour clearly means you have to know how to climb. In last year's Tour de France, the Team Sky rider shielded Chris Froome through some of the hardest climbs in the Pyrenees, ushering him onto the podium.

HOW? Naturally some riders will be better than others at climbing. Your body will set the pace if you are a top-heavy sprinter, but that doesn't mean you can't help yourself. 'Choose a lower gear and try to spin a bit more so your pedalling is more efficient. I sit more towards the edge of my saddle too – that's often where I tend to find myself on a climb,' the Welshman says. 'Try to keep your legs spinning with a cadence of around 80-90rpm.' By keeping your cadence up and not grinding out big gears, you also utilise your energy stores better.



Mind over matter

WHAT? In 2013, Thomas fractured his pelvis on stage one of the Tour de France. 'Trying to put some actual power down was like being sawn in half,' he later said. But with team leader Chris Froome relying on Thomas as his main lieutenant, he wasn't planning on giving up.

HOW? Chris Baldwin of DaybyDay Coaching advises breaking your goals into manageable tasks. 'Breaking things up into small bites can help your mind stay focussed,' he says. Thomas got back on his bike and shepherded Froome to the finish by just getting his bike rolling, 'I could get the bike moving forward, and if I could get it moving forward then stopping was silly.' Thomas took each mile as it came and bossed it.

Be versatile

WHAT? Being a team leader for the spring Classics, a lead-out man and key lieutenant for Chris Froome and an Olympic track champion means that if Thomas is anything, he is versatile. However, calling the 2015 E3 Harelbeke champion a 'jack of all trades' would be to undersell him – his utility is arguably his greatest asset. So much so that Thomas could find himself in contention for the General Classification at this year's Tour de France – Froome himself reckons that this year's race will 'challenge every aspect of the cyclist'.

HOW? By mixing up your training. Don't just train the things you're good at – work harder on the areas where you're not so strong. Train for everything from sprinting to functional threshold power and ride as many events as you can. Experience breeds confidence. 🚴

Hit the track

WHAT? Before becoming the number one workhorse for Team Sky, Thomas plied his trade on the track, winning Olympic gold in 2008 and 2012. It gave him the vital bike-handling skills he needed to compete with the best on the road.

HOW? Try a taster session at your local velodrome. 'Working on the track teaches you to pedal really smoothly and that helps you ride more efficiently on the road because you're getting more out of every revolution,' Thomas explains. Double Olympian track champion Laura Trott notes: 'When you're on the track, you can't freewheel and you can't brake, which means you quickly improve your bike-handling skills.' And skills learnt on the track can easily pay dividends on the road.

10

Ways to get motivated AND STAY MOTIVATED

Stand up, look sharp! Spring is here and the long dark days are over. Here are 10 motivational tips and tricks to get your wheels turning and get you back in the saddle...



Sometimes it's hard to be a cyclist. Everyone – pros and amateurs alike – has occasions when the sofa and a DVD box set look far more appealing than sitting on a bike.

Motivating yourself to get back on the road after the long UK winter can be particularly hard but there are ways to rediscover your cycling mojo. Tim Harkness (above), cycling coach and sports psychologist, shares his motivational wisdom.



1

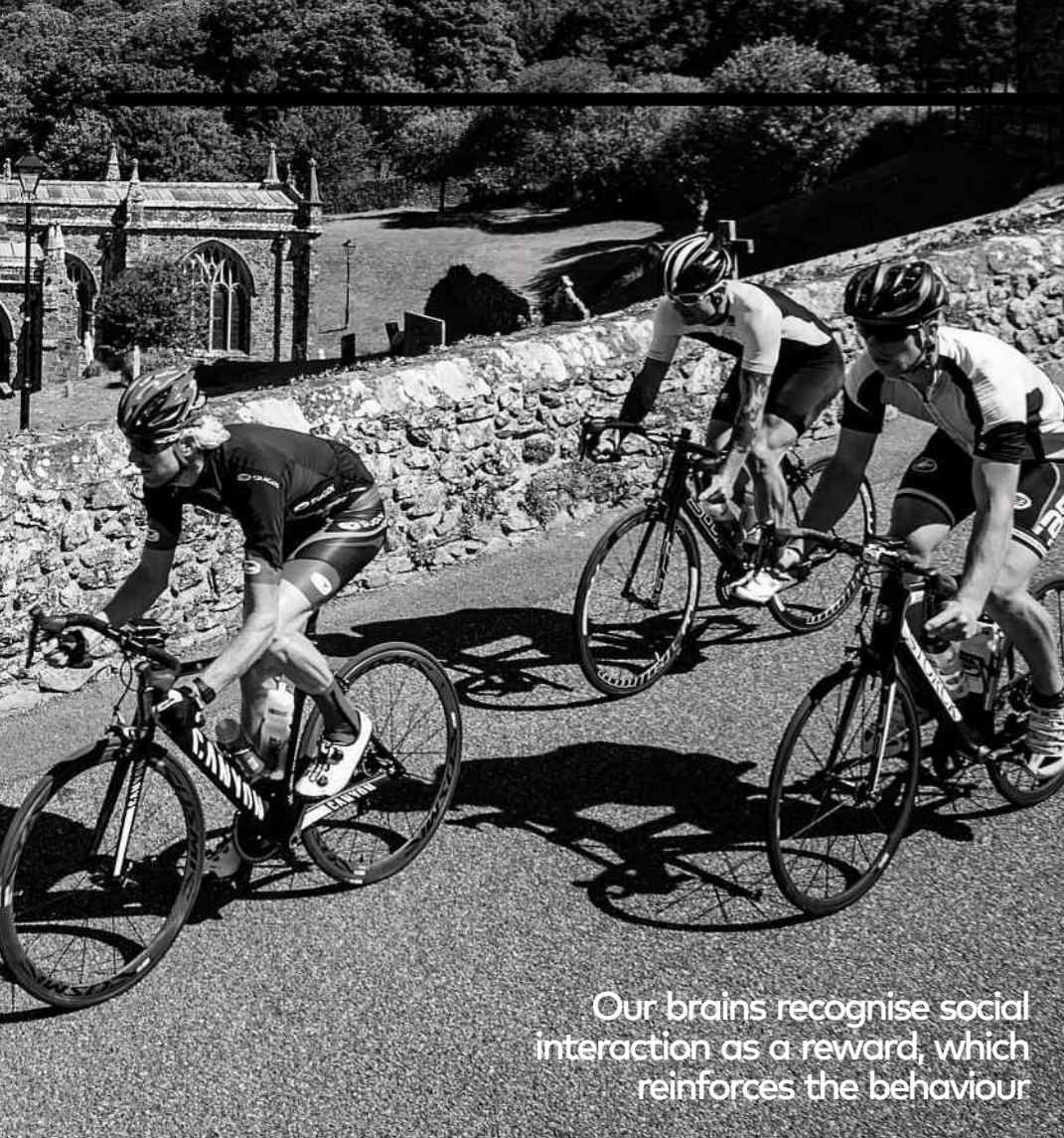
THINK OF THE BENEFITS

'Cycling is not just about the here and now, it's about the future too,' says Harkness. According to scientists, exercise is a long-term investment in your health – what you put in now will almost certainly pay dividends later on in life.

A study by King's College London comparing 2,400 identical twins found that cycling the equivalent of three 45-minute rides per week could add up to an extra nine years off your life.

What's more, scientists at the National Cancer Institute in America found that doing 150 minutes of exercise a week could extend life expectancy by 3.4–4.5 years, when compared to your average sedentary, exercise-phobe.

Exercise is known to reduce the risk of developing type 2 diabetes and heart disease, as well as improving overall health. The effect is almost instant too, so even if you hung up your wheels for the winter, you'll benefit from all that exercise straight away.



Our brains recognise social interaction as a reward, which reinforces the behaviour

4

RIDE WITH YOUR MATES

Cycling is a social sport – ride with your mates and the kilometres tick by almost unnoticed. Our brains recognise this social interaction as a reward and when we get a reward, it reinforces the behaviour.

Fix a regular meeting time and place on the calendar and it's more likely that you'll roll out of bed and rock up on your bike. What's more, when you've made a commitment to others, you don't want to let them down – so even if it's pouring outside, stubbornness and saving face will probably get you out.

In this day and age, social interaction doesn't always mean riding side by side on the road. Harkness points out that virtual reality cycling programmes such as Zwift make even cycling indoors a sociable affair. Arrange to log on at the same time and loiter around in the background until your mates show up – you can have a group ride even if it's in a parallel universe.

2

SET YOURSELF A SMART GOAL

Specific, measurable, agreed, realistic, time-phased... SMART targets are a favourite in the world of business (think in-house training and A3 flip charts) but they apply to cycling, too.

If you've had the winter off and acquired a modest spare tyre around your middle, it's not very smart to make your first ride a 12-hour epic jaunt from London down to the South Coast and back again. The chances are that you'll end up on the train with your bike on your lap, your motivation at rock bottom and a big, greasy burger in your hand. Which would obviously defeat the purpose.

'Setting small, incrementally challenging targets is a more realistic way of getting fit,' says Harkness. Increasing the challenge week-by-week is a tried-and-tested way of realising your goals. How about moving up the leaderboard on that Strava segment? Or upping your average speed by 1kmh on your Sunday spin? For more about this see page 9 of the *Guide to Spring Training* which you got free with this issue.

3

GET READY TODAY FOR TOMORROW

If your bike is dirty, your tyres flat and your kit languishing in your wardrobe, the chances are you'll pass on a bike ride and retire to the sofa instead.

According to Harkness, 'The little hassles in life can affect our behaviour more than we think, causing internal friction and conflict. Making things easy and simple goes a long way to increasing our motivation.'

So, if you plan on doing a turbo session first thing in the morning, set it up the night before, so you've got instant access and minimum fuss. If you're due to meet your cycling buddies at 9am, don't unearth your bike from the shed at 8.55am while shovelling in a bowl of cereal. Set your alarm early and make sure your bike is ready the day before.

You could also organise your cycling kit so everything is washed, fresh and good to go. Hunt out those lost socks and odd gloves and reunite them with their partners. That way all you have to do is get up and ride.



Clean and check over your bike the day before so you're not put off going out for a ride by its poor state



5

TELL EVERYONE YOU'RE A CYCLIST

By making your cycling very public, you're putting your money where your mouth is. Telling everyone and anyone who will listen what your plans are for the season makes it more difficult to back out, so shout it from the rooftops.

Putting a ride on Strava is another form of social interaction – segment hunting, stealing KOMs off your rivals and taking part in online challenges is really rather fun. You're not a cyclist if you're not cycling and if it's not on Strava it didn't happen. Right?

Making a statement out loud in person and repeating it (until people start backing away with their fingers in their ears screaming, 'No more!') cements that positive intention in your brain. So tell your colleagues, your family, your kids and the dog that you're going to ride a century by the end of June and repeat daily...

6

HAVE A VISION – AND AIM HIGH

OK, so you're never going to be Peter Sagan – after all it takes a very special Slovak haircut and a certain flair to become the World Road Race Champion. But 'imagining your way to success can be a powerful tool,' says Harkness.

Visualisation is no longer the preserve of the tie-dyed, crystal-jangling, hippie community. The act of creating and rehearsing a positive mental experience in order to achieve a successful real outcome is a method that's been used by many great athletes from Muhammad Ali to David Beckham, and it applies equally well to cyclists as those engaging in lesser sports.

So imagine yourself completing a cycling challenge, winning a race or simply losing those pounds and being a new, fitter slimmer you and you'll increase the likelihood of it actually happening.



7

ENTER AN EVENT

There's nothing like entering an event to give you the motivational kick up the backside that you need to get out on the bike when it's cold, drizzly and dark. The UK has a year-round calendar of cycling events, so we're fortunately spoilt for choice.

Entering an event in advance can be the little push that you need to get your bike out of the shed and onto the road. If you're new to cycling then start small – many sportives have two or three different routes and it's best to work your way up from the bottom. Riding an event as a team makes it even more likely that you'll stick to your plan and complete the ride – nobody wants to let the side down.

Entering an event as a team makes it even more likely that you'll stick to your plans and complete the ride



Entering a big sportive gives you a specific target to help maintain focus



The prospect of a week in the sun on your bike will give a focus and sense of purpose to your training

If scenery like this doesn't inspire you to get out on your bike, what will?

8

DO IT PROPERLY – GET A COACH

Getting fit is not easy and it will almost certainly involve some degree of pain and a fair amount of undignified huffing and puffing. Having someone to answer to is a tried-and-tested way of motivating you to get you on your bike. A coach will also design a programme around your lifestyle, so that you make the most of the time you have, however limited it may be.

Compared to a set of maximum-bling, lightweight, carbon wheels, a coach is also a relatively cheap investment and one that will almost certainly make a much bigger difference. If you do need to drop some weight, why not lose it from your body and not your bike?

Having a structured training plan, designed to work on your weaknesses and enhance your strengths, is a proven way to help you hit your cycling goals. It will also make you a more efficient cyclist – an hour of intervals can be more beneficial than a three-hour potter with a coffee and cake stop.

9

BECOME A MASTER CYCLIST

'Could you be a better cyclist? Most of can answer yes to this question,' says Harkness. 'Finding something to improve on can help us connect cycling to something bigger and gives us a sense of purpose,' he adds. In simple terms, this means the feelings that come from getting good at cycling can overspill into our everyday lives and help us feel good!

If you want to work on your technique, a circuit racing training day (check out britishcycling.org.uk/events) can help improve bike-handling skills and will soon have you cornering like Vincenzo Nibali. Or if you want to be a better climber then how about a training camp in the Alps?

And if you really want to be a master cyclist, there are two essential skills that you absolutely need to crack – the track stand and taking your rain jacket on and off while riding no-handed. These are tough tasks and can be fraught with danger. To avoid a trip to A&E, practise somewhere safe, when nobody is looking.

10

BOOK A CYCLING HOLIDAY

If you're feeling glum and it's grey outside, the prospect of a week in the sun on your bike is one way to put some cheer in your cycling life. Booking a cycling holiday (see issue 16 for ideas) will give you a focus and add a sense of purpose to your training.

A cycling holiday is an opportunity to tick off those bucket-list Alpine climbs, ride the roads the pros train on in Mallorca, or just rediscover why you love cycling. The prospect of getting into shape to look good in summer Lycra kit should also give you a nudge towards a new, slimmer you.

Cyclists wear their tan lines with a great deal of pride (some even go so far as to create them with masking tape and a tub of fake tan – not that we condone it!) but go on a cycling holiday somewhere warm and you'll get the real deal, and you can wear them with pride.  Want more personal coaching advice? Email Tim Harkness at tim.harkness@thinking-performance.com for details

HOW TO

True a wheel

Wheel wobbling side to side? Follow our guide and get it back on track

As the years have rolled by, bicycle wheels have become ever more complex. However, almost all still adhere to the same basic design – one that a medieval cartwright would recognise. Comprising a rim held in place by a series of tensioned spokes emanating from a central hub, the strength of the whole assembly depends on each component perfectly balancing the next. Smack them into a pothole and it's easy to upset that equilibrium. If your wheels are looking a little wonky, following the six simple steps below will soon whip them back into shape.

TIP: A light squirt of GT85 can help get a stuck nipple moving. Just remember to wipe it off before refitting the wheel if you want your brakes to work.



1 TAKE THE STAND

We're looking at lateral alignment, where the wheel is pulling to the side. Pop the wheel out of the bike and into the truing stand. Dial in the callipers on the stand vertically until they're level with the outer edge of the rim.



2 GIVE IT A SPIN

Spin the wheel in the stand. Adjust the distance between the jaws of the calliper until it sits just clear of the rim. Check the wheel isn't bobbing up and down, as this will require radial truing – or a trip to the bike shop.



3 FIND THE BUCKLE

While slowly spinning the wheel, dial in the jaws until they begin to lightly contact the rim, this will indicate where it is most heavily buckled. Rotate the wheel back and forth to locate the centre of the buckle



4 PICK YOUR SPOKE

If the rim is pulling to the left, find the spoke coming from the right-hand of the hub nearest to the centre of the buckle. If it's pulling to the right, find the corresponding spoke coming from the left-hand side of the hub.



5 DO THE TWIST

Give the nipple half a turn. If viewed from above (through the rim) the nipple will tighten clockwise, however when viewed in the stand, this is reversed and it will need to be tightened in an anti-clockwise direction.



6 CHECK THE RESULTS
Move the wheel back and forth to check the result of your adjustment. If necessary tweak the tension further. Dial in the calliper slightly and move on to the next buckle.

Wheel truing essentials

Although it's possible to accomplish a fast and dirty wheel true without using a dedicated stand, having the right tools definitely makes life much easier. Here are three to consider...

TRUING STAND

While the Park Tool TS-2.2 Professional Wheel Truing Stand (£250, madison.co.uk) is awesome, it might be a bit steep for the occasional mechanic. This portable, folding stand from Lifeline (£40, wiggles.co.uk) is a good budget alternative – plus it folds down to take up a minimum of storage space.




REPAIR MANUAL

If you want to learn more Park Tool's *Big Blue Book of Bicycle Repair* (£25, madison.co.uk) is a good place to start, with a comprehensive section on servicing and adjusting wheels.

Parktool.com also has plenty of great free resources covering all areas of the bike.



SPOKE KEYS

Even traditional generic spoke nipples come in an annoyingly wide range of sizes. That's why it makes sense to get a spoke wrench that'll fit a variety of different ones. This three-way wrench from Lezyne (£8, upgradebikes.co.uk) is pleasingly ergonomic to use. 



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cyclist.co.uk
The Road Bike Site

HOW TO

Feed your brain

Fill your head, not just your stomach, if you want to achieve success in the saddle

When you're training, it's easy to forget about your bonce when fuelling your body. But your brain is an important part of the equation for any athlete, amateur or pro. Your brain is basically a natural computer that uses nutrients to power it, with glucose being its primary source of fuel. Unlike your muscle cells, your brain

cells can't store this glucose so it needs a steady supply to function properly, consuming about 150g daily. Fail to feed it properly before or during a ride and you'll experience confusion or dizziness – two potentially dangerous symptoms.

One of the biggest no-nos you can make before a big ride or training is to skip breakfast, or not eat

enough. Glucose levels are low after sleep and a decent breakfast will boost your body's store of the stuff. Then eating every three to five hours will ensure levels are maintained. You will need to plan meals and snacks around your ride training schedule but try to include at least some of the following to help maintain healthy brain function.

B12



Tofu, mackerel, eggs, beef liver, fortified cereals, shellfish
Any one of these is a fine source of vitamin B12, which is essential for a healthy nervous system. A deficiency can result in brain-tissue degeneration.

B3



Sunflower seeds, mushrooms, green peas, avocado, tuna, turkey
All of these whole foods have high levels of niacin or vitamin B3. This nutrient is essential to the manufacture of many nerve chemicals.

FOLIC ACID



Citrus fruits, lentils, okra, Brussels sprouts, almonds, carrots
All of these foods are rich in folic acid, which you need to maintain blood choline levels. Choline is a constituent of acetylcholine which is an important neurotransmitter in your brain.

ANTIOXIDANTS



Blueberries, blackberries, red grapes, kiwi fruit, kale. Antioxidants are needed to smash free radicals – the pesky molecules that age and damage your body including brain cells.

B5



Cauliflower, sweet potato, shiitake mushrooms, and broccoli. These are all excellent sources of pantothenic acid or vitamin B5, which plays a key part in the transmission of nerve impulses.

OMEGA-3



Oily fish. You've no doubt heard it called brain food – and with good reason. It's rich in omega-3 fatty acids which studies have shown is key to brain cell communication.

H2O



Water. Don't forget to hydrate – there's nothing better for your body, including your brain, than good old H₂O.

IRON

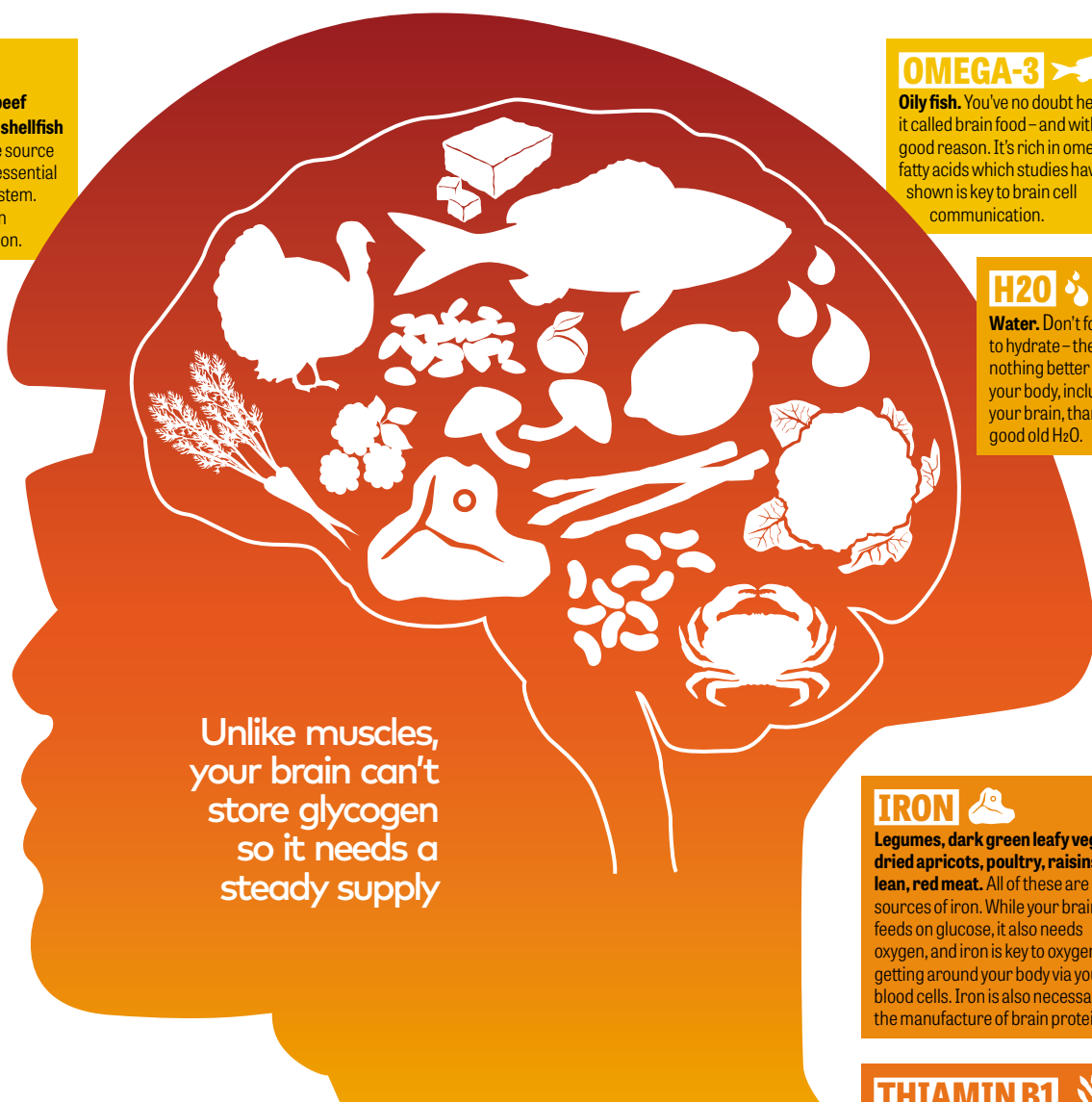


Legumes, dark green leafy veg, dried apricots, poultry, raisins, lean, red meat. All of these are rich sources of iron. While your brain feeds on glucose, it also needs oxygen, and iron is key to oxygen getting around your body via your blood cells. Iron is also necessary for the manufacture of brain protein.

THIAMIN B1



Asparagus, squash, macadamia nuts, trout
All will supply your brain with thiamin or vitamin B1, which is essential to keep brain cells healthy. 🚴



Unlike muscles,
your brain can't
store glycogen
so it needs a
steady supply



STORCK
Lightweight

 **SCOTT**



Bianchi

PINARELLO



cannondale

CANYON



Don't just look...ride!

Test some of the world's best bikes at the Cyclist Track Day

Bike shows are great places to see the latest road bikes up close, but wouldn't you rather get on them and ride? That's exactly what you can do at the first ever Cyclist Track Day. We've brought together 10 of the biggest brand names in cycling, who will have their top bikes available to test. If you're considering a new purchase in 2016, it's the perfect opportunity to compare models and find the right bike for you.

The action will take place on Sunday 17th April at the Lee Valley VeloPark in east London. Located next to the iconic Olympic velodrome, the mile-long outdoor track is purpose-built for road riding and offers a fast, winding circuit to get the best out of each bike. Brand ambassadors will be on hand to get you set up and discuss the bikes. Visit cyclist.co.uk/trackday for ticket details, and join us for the ride.

Sunday 17th April 2016, Lee Valley VeloPark, London
cyclist.co.uk/trackday

Cyclist
MAGAZINE

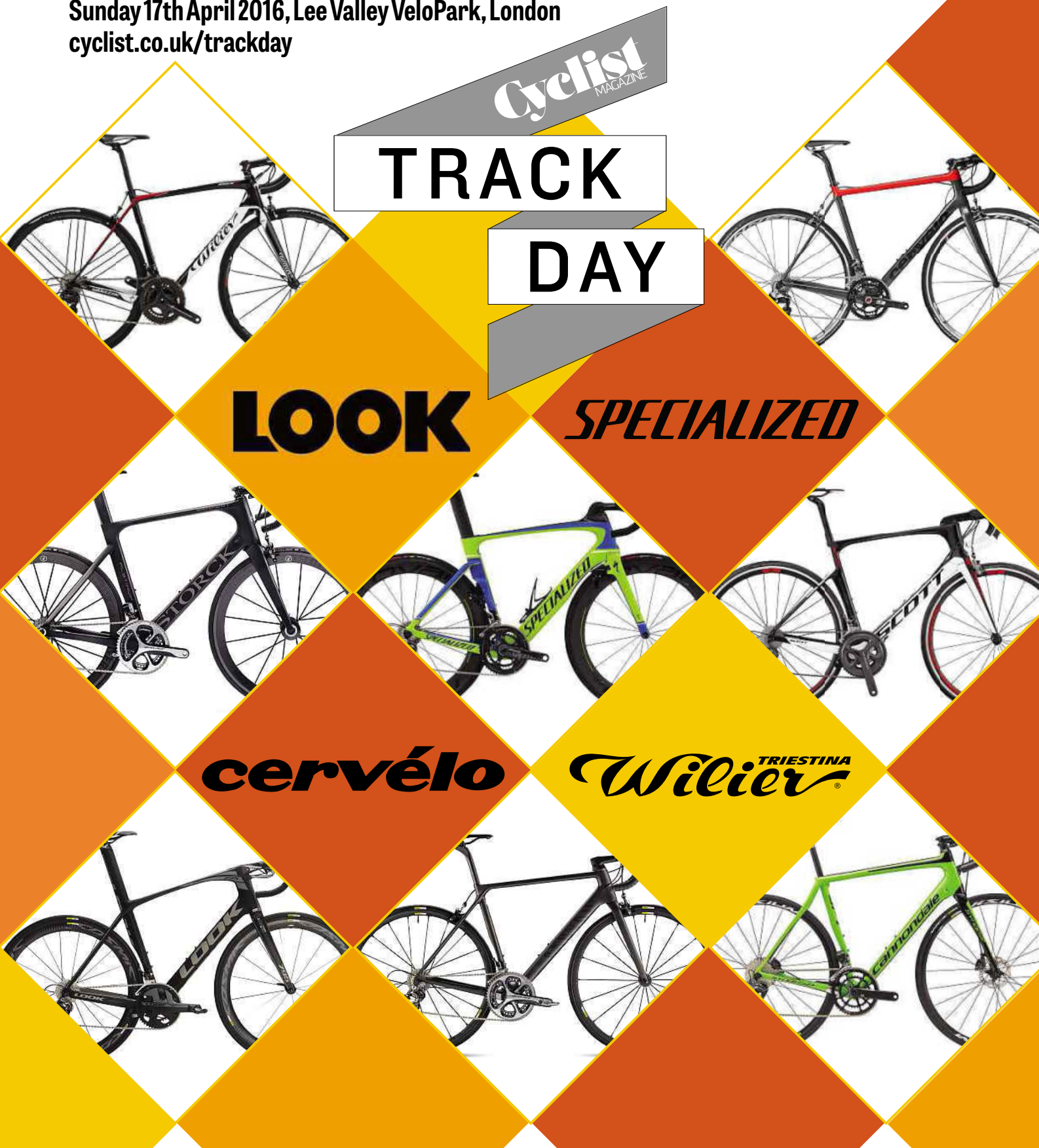
TRACK
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OUT THERE

INSPIRATIONAL ROUTES AND
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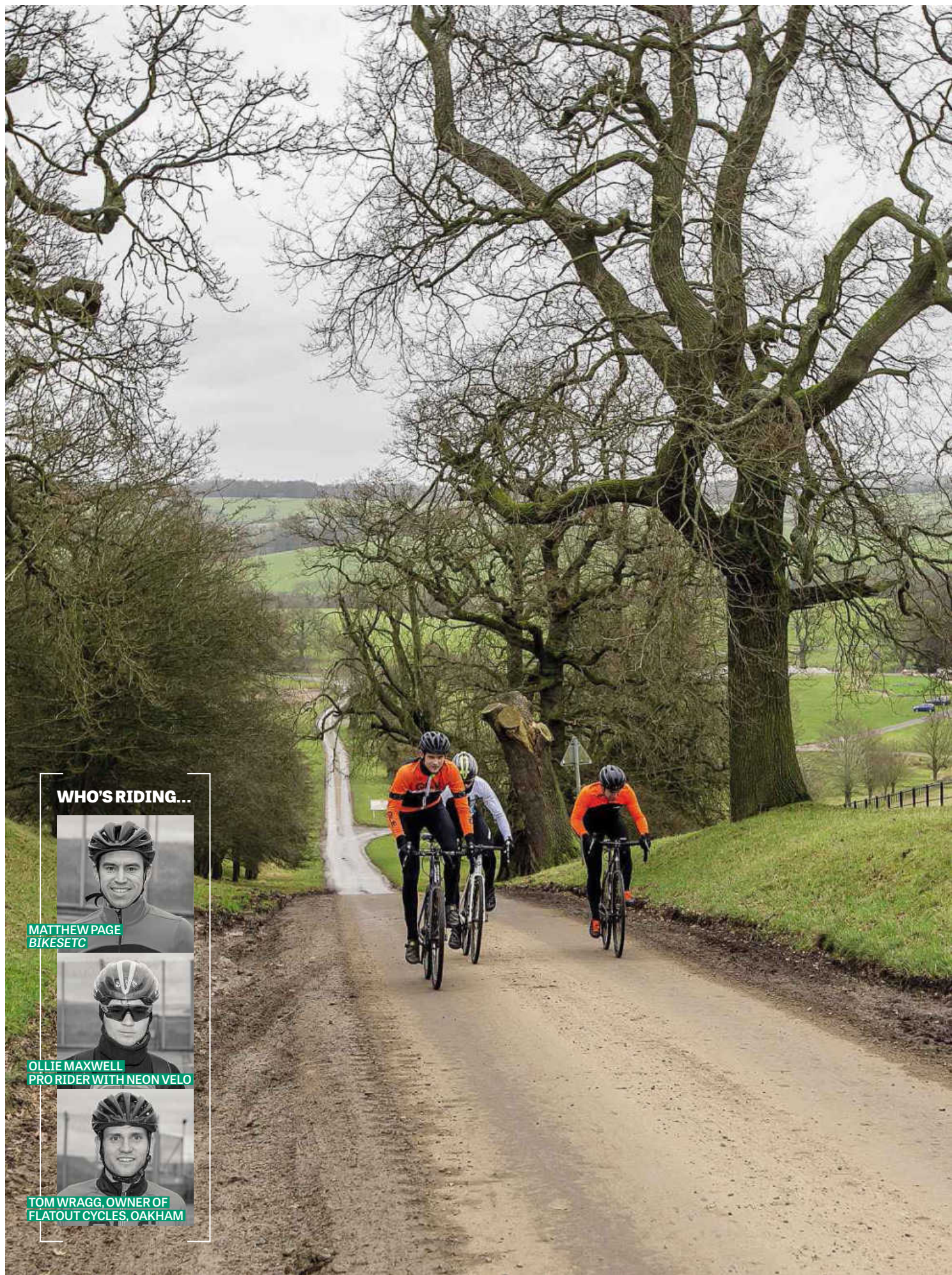
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Cornwall p128



WHO'S RIDING...



MATTHEW PAGE
BIKESETC



OLLIE MAXWELL
PRO RIDER WITH NEON VELO



TOM WRAGG, OWNER OF
FLATOUT CYCLES, OAKHAM



RUTLAND CLASSIC

A taste of adventure in
England's smallest county

WHERE: **OAKHAM, RUTLAND**

TOTAL DISTANCE: **48KM**

TOTAL ELEVATION: **588M**

With the spring Classics season almost upon us, we felt it was only right to head to the home of the UK's own Belgian-style pro race, the Rutland-Melton CiCLE Classic. And though we don't fancy taking on the full 179km on this overcast and windy January day, we've used sections of the route and added a bit of extra fun in the shape of several stretches of dirt roads.

Our guide is local pro Ollie Maxwell, who finished 17th in the 2015 edition of the CiCLE Classic in his first year, so it's fair to say he's pretty handy! That year, the pros completed the race in a rather quick 4hrs 16mins but thankfully, Ollie has agreed to go easy on us today. Also on the ride is Tom Wragg, owner of local bike shop Flatout Cycles and a prolific mountain biker with several endurance wins to his name. He's also owner of Ruby, perhaps the most famous trail dog in the area.

Rutland is a small, relatively flat county that is perhaps best known for its reservoir and – for cycling fans, at least – the CiCLE Classic, so even our relatively short loop will take in a good chunk of what the county has to offer. Starting from the pretty market town of Oakham, on a cold but thankfully dry day, we head north, the wind on our backs making it plain sailing to begin with. The first 10km along the quiet and fairly flat road disappear in a flash, as we pass Whissendine and its old windmill standing proud above the horizon.

Soon we turn south, passing through the village of Little Dalby and climb gradually ➔

HIGHLIGHTS

Three of our favourite points on this scenic but not too challenging route

SOMERBY TO OWSTON

The part of the route with the most off-road sections. Nothing too severe, but fun none the less.

LAUNDE ABBEY

The only really tough hill on the course. Although it's only 400 metres long, it has a maximum gradient of 17%.

OAKHAM VILLAGE

Pretty market town where the ride starts and finishes, with plenty of nice places to grab a coffee and food before or after the ride.



The hills aren't too steep and our bikes handle the rough roads with style

into the village of Somerby, which is where the fun really begins. At first it is just a rough singletrack lane, the occasional deep puddle and muddy patch, plus a few gates to open along the way. As we reach the village of Owston, Ollie explains where the race goes, heading through the grounds of a factory and onto a private lane. The sight of almost 200 riders in a peloton charging through these tiny lanes must be an incredible sight.

Owston is a major part of the route and where Tom suggests that anyone come to watch if they want to see the pro race (this year's edition is on Sunday 24th April). Our route misses one of the toughest sections, along Bruce's Lane and although we're riding 'adventure' bikes, designed to cope with the worst kind of road surfaces, our route today would be manageable on pretty much any

road bike, though the large-volume tyres on our bikes are the optimum choice for comfort. For the pros, it's a war of attrition with punctures and mechanicals galore.

Continuing south, we enter the grounds of Launde Abbey, a 12th-century priory and later a manor house built in the 15th century. The big house sits almost in a bowl, with hills gently rolling up in the distance all around it. For anyone looking to make an early pit stop, there is also a café within the grounds.

Typically, Ollie has picked the steepest possible road out, the 17% wall that lies ahead of us is dead straight and quite imposing. Thankfully, it isn't too long, under a minute for the fastest riders and even at a steady pace, most people will be up within two minutes.

Just before reaching the hamlet of Loddington, we take a left, although anyone

THE ROUTE



- 1 From Oakham town centre, take A606 north to Langham, soon after turn right onto minor road to Whissendine.
- 2 In Whissendine, turn left onto Melton Road, signposted Melton Mowbray.
- 3 Cross A606, continue through Little Dalby, heading south to Somerby. Turn right to go through Somerby, then fork left signposted CR64. From here the roads begin to deteriorate, with some sections that have gates across
- 4 Continue South, skirting by Owston and follow signs to Launde, continue through Launde Estate and up the steep, straight bank of a climb.
- 5 Just before Loddington, turn left towards Belton before heading north onto Lambley Lodge Lane where there is another unsurfaced section.
- 6 After passing through Ridlington head north, passing through Brooke, up the hill and down the other side, back into Oakham for coffee and cake.



The lack of traffic on the minor roads and trails just adds to the appeal



THE 17% WALL THAT LIES AHEAD IS DEAD STRAIGHT AND QUITE IMPOSING

keen to extend the ride can grab a coffee at Café Ventoux (cafe-ventoux.cc) in the nearby village of Tugby – as you might guess from the name, it's a very cycle-friendly establishment. Our route heads east and into the wind for us, making the going much slower for a time as we continue through Belton-in-Rutland and then back off-road again along Lambley Lodge Lane, which narrows to a bridleway for a short section before turning back to a gravel road.

The area north of us all around the River Chater is full of dirt roads and bridleways and there's great fun to be had exploring them if you're looking for a more adventurous ride. Instead, we take one final gravel section, heading towards Wills Farm on a fast and fun gravel road that can be taken flat out. Frustratingly, just as we push a little faster we are forced to stop as Ollie has picked up a

massive thorn puncture through his sidewall. But a few minutes later, we're back riding and back onto tarmac roads to Ridlington where we turn left and head north again and quickly up to top speeds as we take a short but fast descent, before climbing back up to the village of Brooke. One final climb of the day is ahead of us as we leave the village where at the top, even on a fairly dull day like today, the view across to Rutland Water in the distance is a good one and worth the effort.

With the views soaked up, the only thing left for us to do is shoot downhill, back into Oakham. The ride has been a really enjoyable one and the distance will be manageable for most. With only a few challenging climbs, it's the gravel and off-road bits that really made the day. They're not severe, but add a new element that leaves you grinning. 🚲



BEST OF BELGIAN BERGS

The short, punchy, cobbled climbs that make and break even the hardest pros...

The spring Classics season is almost upon us, famous for brutal racing, grim weather conditions and rough, cobbled farm tracks. These long and arduous races tend to be wars of attrition, with the decisive race-winning moves often made on the short but steep bergs (hills) that litter the routes. While they may not match alpine passes for epic scale, their vicious gradients and slippery surfaces make them a real test of nerve, strength and bike-handling skill. We've highlighted three of the most notorious for you to try yourself – all feature in the Tour of Flanders (rondevanvlaanderen.be), Belgium's biggest race, which celebrates its 100th edition on 3rd April this year.

Koppenberg

A big fuss is made about this 600m-long climb, in the village of Melden, just outside Oudenaarde in the Flemish Ardennes. 'Heads Hill' may stand just 64m-high but it's firmly fixed in cycling's hall of fame.

First used in the Tour of Flanders in 1976, the climb, which tops out at 20%, is known for causing mayhem. In its inaugural year, only the first four riders rode up it (the rest hit the deck and had to walk), and a nasty crash in the 1987 Tour of Flanders saw the berg excluded from the Classic race for the next 15 years.

The Koppenberg is well signposted from



The Koppenberg would be terrifyingly steep even without the cobbles

Oudenaarde and is hard to miss if you ride approximately 3km southeast on the N8 highway. At Melden, turn left onto Meldenstraat. As you exit the village, the cobbles and the climb proper begin.

Here the road narrows and is flanked by steep, grassy banks. The average gradient from top to bottom is around 11% but the gradient soars to 20% in the first 200 metres (and by then you're only halfway up). If it's raining, the Koppenberg can resemble a gully. Add cobbles into the mix and it's like riding over blocks of ice – one wrong move and it's man down, followed by an arduous stumble on foot to the top.

Paterberg

In 1986, a cycling-mad Belgian farmer made a wish: that the Tour of Flanders would pass

by his house on Paterbergstraat, near Kluisbergen. So he paved the hill in front of his farmhouse with cobbles. Until then, the Paterberg had been a perfectly acceptable piece of smooth tarmac, albeit it one that had no appeal to cyclists whatsoever.

With cobbles laid, the farmer's wish came true and the Paterberg was included in the race. Since 2012 it has been the final climb before and despite being only 400m-long and 48m-high, it often plays a decisive role.

In 2013, Swiss one-day race specialist Fabian Cancellara staged an impressive attack as he reached the halfway point, a move that left Peter Sagan reeling and proved decisive in the race. In a show of (almost) inhuman strength Cancellara powered up the climb seated, even as the gradient hit 20%, while Sagan was forced out of the saddle (considered poor technique on the cobbles). The Swiss rider won by 30 seconds.

Paterberg kicks off with a right-angled turn at the bottom of the climb, which will almost certainly kill any pace you were carrying up to that point. Then, through wide-open fields, it's a flat-out 400m slog to the top.

IN THE 1976 TOUR OF FLANDERS, ONLY FOUR RIDERS RODE UP THE KOPPENBERG – THE REST WALKED



BikesEtc gets to grips with the fearsome Paterberg

RACE NUMBERS

€250,000

The alleged cost of repaving The Koppenberg in 2001

0

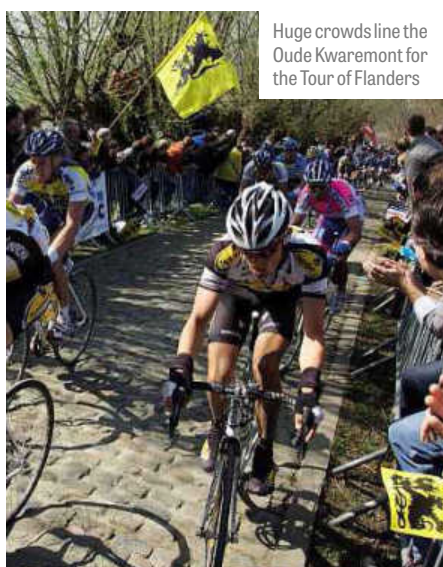
The number of cobbles present on the Paterberg climb in 1985

6.6%

The alcohol content of local speciality Kwaremont beer

19

The number of cobbled climbs in the Tour of Flanders



Huge crowds line the Oude Kwaremont for the Tour of Flanders

DO IT YOURSELF

Oudenaarde is the most obvious base for a tour of the bergs. The Chain Stay (thechainstay.com) offers cycle-friendly accommodation, and cyclists also recommend the Leopold Hotel in Oudenaarde (leopoldhoteloudenaarde.com).

To get to Oudenaarde by train from London St Pancras International takes approximately 3.5 hours (thetrainline-europe).

Alternatively, to reach Oudenaarde by car, take the Dover-Dunkerque car ferry (dfdsseaways.co.uk). From Dunkerque, Oudenaarde is a 90-minute drive.

To get a feel for what the pros go through, enter the Tour of Flanders sportive (sportstoursinternational.co.uk/events/tour-of-flanders) which takes place the day before the pro race. Or try the BikesEtc route starting and

finishing in Oudenaarde, with a testing selection of cobbled climbs – download the GPS from cyclist.co.uk/18Flanders



BELGIUM

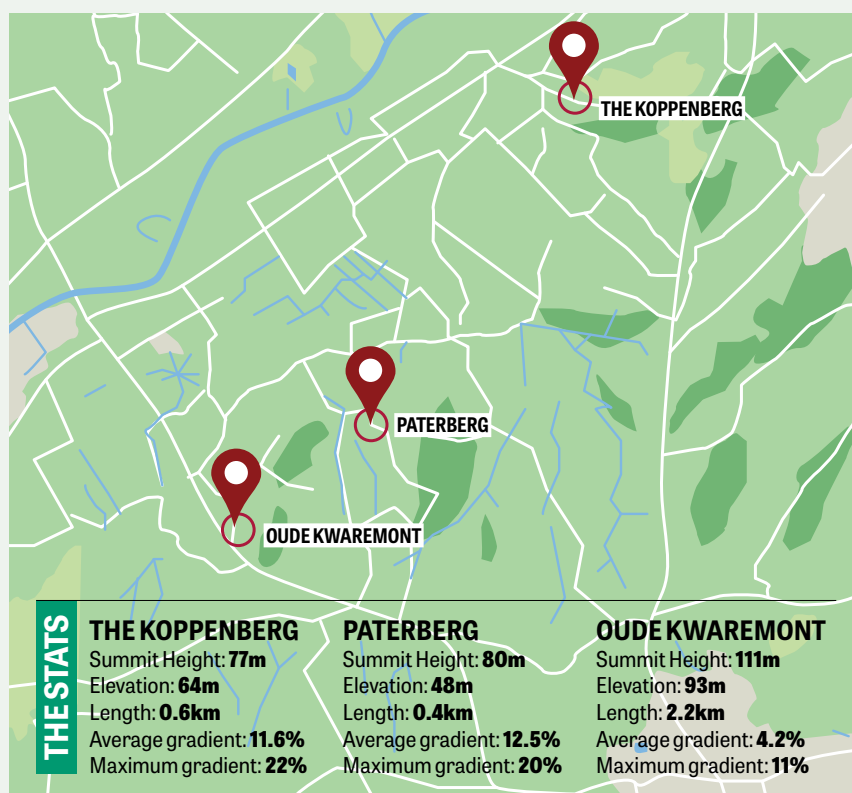
Oude Kwaremont

One of the longest Belgian bergs, this road up the Kluisberg hill has an average gradient of only 4.2%. But it has a fearsome reputation as it features three times in the Tour of Flanders – at the start, in the middle and at the end.

You'll find Oude Kwaremont just south of Kluisbergen on the East-Flanders ridge. At the foot of the climb, the road bends left and then right. The first 600m is on tarmac but the remaining 1,600m is cobbled – and where the cobbles start, the road gets steeper and narrower, peaking at 11%.

Around halfway up, the road kicks into Kwaremont Square, where huge crowds gather on race day. Here the gradient drops to 2% but there's still another kilometre of cobbled climbing before the top. The cobbles are worn and smooth, so when it rains, Oude Kwaremont is a potentially lethal ride.

King of the Mountain on Strava is Niki Terpstra who ripped up the climb in exactly 5mins in the 2014 E3 Harelbeke, a warm-up race for the Tour of Flanders. Terpstra was riding at 30.1kmh. Nuff said! 🚴





RIDE THE TRAFALGAR WAY

Follow in Nelson's footsteps on this epic three-stage endurance ride



WHEN: 15-16 OCTOBER 2016 **WHERE:** FALMOUTH TO LONDON (COLOSSUS); FALMOUTH (BRITANNIA); EXETER (CONQUEROR), SALISBURY (VICTORY) **DISTANCE:** 477KM/172KM/168KM/137KM **COST:** £120 (SOLO COLOSSUS); £456 (TEAM COLOSSUS); £42 (BRITANNIA/CONQUEROR), £48 (VICTORY) **SIGN UP:** RIDETHETRAFALGARWAY.COM

What is it?

A 477km/296-mile, 24-hour, supported endurance ride from Cornwall to London, following an historic route from the southwest of England to the UK's capital. The event can be tackled as a team relay, or you can attempt the whole thing solo. For those looking for a more moderate challenge, there's the option to tackle one the three legs of the route, which include a night ride into central London (the Victory, which sets off from Salisbury at midnight).

Tell me more about the route...

In October 1805, following the Battle of Trafalgar, Lieutenant John Richards Lapenotière was ordered to hot foot it to London with dispatches detailing the British Navy's victory over the French and Spanish fleets. He was also bearing news of Lord Nelson's death. The lieutenant's ship landed in the rough seas off the Falmouth coast and what followed was a 37-hour journey through Cornwall, Devon and Hardy's Wessex before the old boy arrived – most likely a little knackered – at Admiralty House on Whitehall. Ride The Trafalgar Way follows the route of Lapenotière's journey, albeit by bike, rather than by horse.

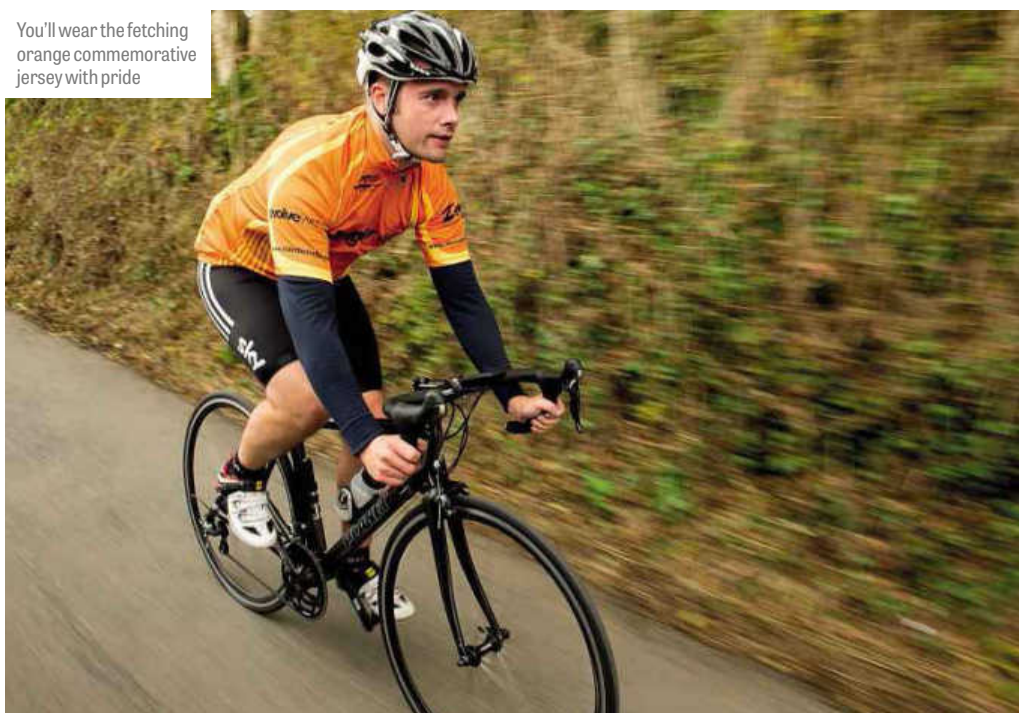
So it's a flat ride then?

Er, no. Cornwall and Devon are notably hilly, so you'll need to be prepared for an undulating ride with the odd serious gradient thrown in. You'll skirt the Cornish moors, past the granite tors of Dartmoor, spin along the Jurassic coast and through Dorset before tackling a relatively flat run into London, via the home counties.

Why October?

The Battle of Trafalgar took place on 21st October and since 1896, this date has been known as

You'll wear the fetching orange commemorative jersey with pride



Trafalgar Day to celebrate the Royal Navy's victory. It has, from time to time, been suggested that 21st October become a public holiday to commemorate Vice-Admiral Horatio Nelson.

And where do I stay?

Stay? This is an endurance ride, so there's no holing up in a cute B&B and tucking into a full English before you ride. That said, there are plenty of aid stations and feed stations along the route but the idea is that you keep rolling through day and night until you reach the city lights. If that all sounds a bit much, why not do just do one leg and head home for a hot bath after?

And what about safety?

Jim Bellinger, the brains behind Ride The Trafalgar Way, has worked in event safety and route planning for a long list of professional cycling events and amateur sportives, including the Tour de France and Velothon Wales. What's more, riders using GPS systems are tracked along the way by the event team, so any unintentional detours will soon have the broom wagon hot on your tail, with directions or a lift back to the route.

So is it a race?

No. It's a challenge but there's more to this event than 'he who crosses the line first'. Ride The Trafalgar Way is about making a journey along an historic route with a bunch of like-minded comrades, while testing your physical and mental stamina – and hopefully having fun doing so.

What's the set up? Is it on closed roads?

The event takes place on open roads. Each rider can follow a GPX route and it is well signposted. A broom wagon will carry your dry kit bags between the start and finish points of each leg, and can offer mechanical and medical assistance. Remember, this is October, so when it comes to weather you can expect the unexpected.

What do I get at the end?

A celebration! Admiralty House, on London's Whitehall, was the official residence of the First Lord of the Admiralty until the position was abolished in 1964. More recently, John Prescott was in residence during his time as Deputy Prime Minister. It's a magnificent building and a suitably grand place to end a very special ride.





Arriving in London, riders pass through the Wellington Arch at Hyde Park Corner



CLUB RUN

BikesEtc heads up the Norfolk coast with VC Norwich

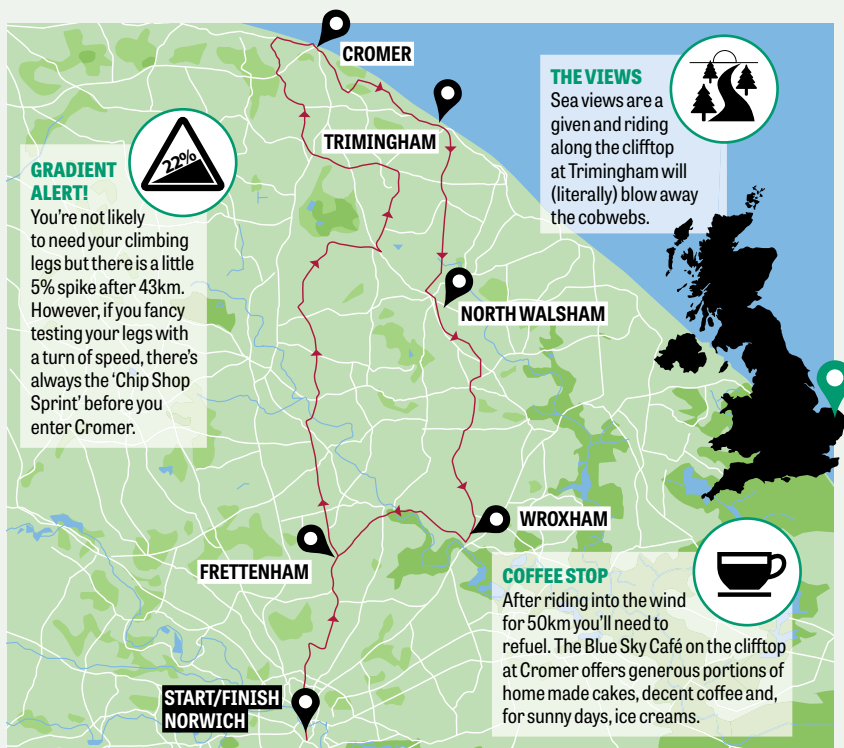


THE CLUB Formed in 1976 primarily as a track and road race team, Velo Club Norwich has an impressive racing pedigree. It includes former World Time Trial Champion Emma Pooley among its alumni and still enjoys racing success, its members regularly achieving podium places in the Eastern Cycling League. VCN is also strongly represented on the track – Victoria Williams won bronze in the women's 200m sprint at the 2015 National Track Championships.

Whatever your level or area of cycling interest, though, everyone is welcome – with up to four rides leaving the city every Sunday, the club caters equally well for those who like to ride fast and those who prefer a more leisurely roll into the countryside. Given its size, as one of the biggest clubs in Norfolk, it's no surprise that the bold red and black VCN jerseys are a common sight on the lanes around Norwich.

The Tour of Norfolk is a key event that attracts a large number of VCN riders and the club itself hosts a range of events from 10-mile TTs to a 100km Audax and both a men's and women's road race. Oh, and there's an annual club treasure hunt for the kids. 🚲

FOR MORE DETAILS SEE
vcnorwich.co.uk



VC Norwich's Club Run

DISTANCE: **93.5KM** TOTAL ELEVATION: **658M**

DOWNLOAD THE ROUTE: CYCLIST.CO.UK/18NORWICH

Want to see your club run in *BikesEtc*? Email us at bikesetc@dennis.co.uk



Picturesque Cornish harbour towns always make a great photo opportunity

CORNWALL

Undulating moors, shady lanes and harbour towns

TOTAL DISTANCE: **87KM** TOTAL ELEVATION **1,307M**

Where does the route start?

From St Ives, a seaside town and port on Cornwall's north coast. It lies north of Penzance and west of Camborne on the coast of the Celtic Sea.

How do I get there?

By road, take the M5 to Exeter, then the A30 across Bodmin Moor and down through Cornwall. There is also a good service by train from most major cities.

What's the route like?

It undulates like a rollercoaster! The route hugs the coast from St Ives to Penzance and then circles back over the moors to the artists' haven of St Ives. The first leg sees you climb out of town for 4km from the harbour to the junction of the B3306 and the B3311, where you fork right. In the first 30 minutes you'll ride past rock tors, granite spires, and high ridges on your ascent to Eagle's Nest (see later). The ride passes through Sennen Cove (a surfing beach and coastal village), Mousehole, Penzance, New Mill and Lelany before returning to St Ives.

What's the most scenic bit?

The coast around Land's End is more wild and rugged than the lush, green tourist honeypots of Newquay and Padstow, further north. It's all remote moorland around here and looking west, the land appears to drop vertically into the sea. The road from St Ives to Land's End

follows the contours of the coast in a series of ebbs and flows, making it perfect cycling territory. The road flattens as you pass the Carn Galver tin mine, a relic of the area's industrial heyday. Carn Galver means 'rock pile at the lookout place' in Kernowek (that's Cornish to non-natives). It's pretty impressive.

Are there any killer climbs?

There's a nasty 21% as you head towards St Just, mainland Britain's most westerly town, which lies in an official Area of Outstanding Natural Beauty. There's also a Strava challenge called 'The Eagle has Flown The Nest' tucked away in the final leg that peaks at around 14%. You might need to take a breather after that one. And if you fancy a small detour, the steep road down into Sennen Cove provides a nice challenge on the way back out.

Where's the café stop?

The Apple Tree Café and Bakery (theappletreecafe.co.uk, 01736 872753) in Trevescan about halfway round, serves artisan veggie burgers, local ice cream, Cornish cream teas and cakes galore.



Back in St Ives, the Trevoise Harbour House or Star Inn (which also doubles as the Penzance Wheelers' clubhouse) are both great for a post-ride ale.

What about the road surface?

Refreshingly pothole-free and smooth on the whole, but there are a few cattle grids to watch out for. It's all a matter of perspective.

Is there anywhere to stay?

If you fancy making a holiday of it, the Trevoise Harbour House in St Ives is a stylish boutique guesthouse. Ordering an early breakfast is no problem if you're planning to set off on an early ride, but with things like home-made granola, sourdough toast, hot croissants filled with Cornish ham, full Cornish breakfasts and great coffee on offer, you might want to linger. Visit trevoisehouse.co.uk for details. 🚲

THE ROAD FROM ST IVES TO LAND'S END FOLLOWS THE COAST AND IS PERFECT CYCLING TERRITORY



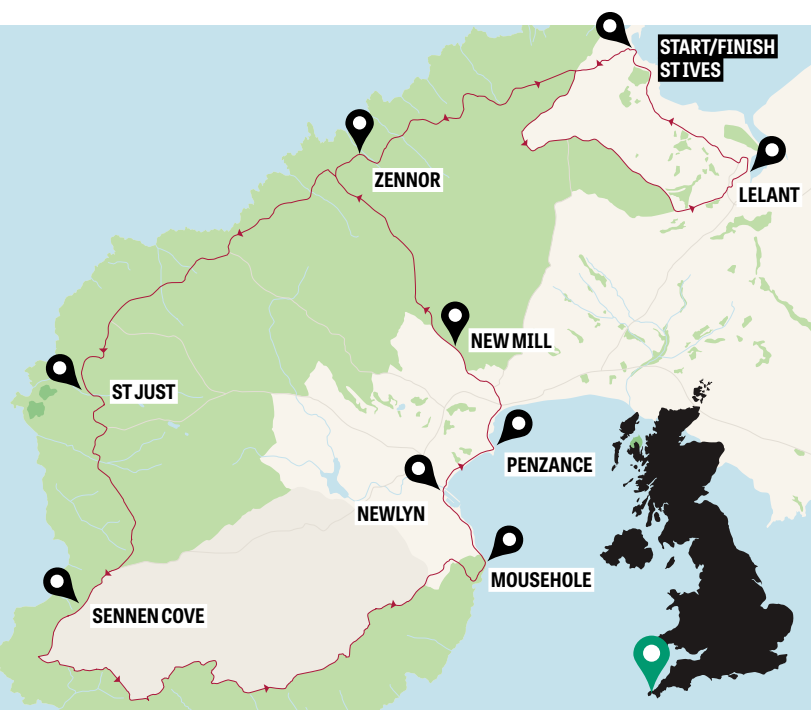
Road surfaces are generally good, but the gradients can be steep

SOUTHERN TRIED

Follow the Cornwall loop

GPS DOWNLOAD cyclist.co.uk/18Cornwall

- 1 From St Ives, head south-west along the coast on the B3306, through Zennor and St Just.
- 2 Follow this through Sennen Cove until the junction with the A30.
- 3 Turn right towards Land's End. Just after the Sea View Holiday Park take the first left to Trevascan.
- 4 Turn left at the Apple Tree Café and join the B3315.
- 5 After around 13km, pass the right turn to Lamorna. Take the next right to Mousehole down Raginnis Hill.
- 6 After the village take Cliff Road to Newlyn, then Penzance.
- 7 Head out of town past the station and take the B3311 to Gulval.
- 8 Take the right fork to New Mill and turn right onto the B3306.
- 9 Stay on this road to the junction with the B3311.
- 10 Take the sharp right along Towednack Road.
- 11 Cross the B3311, taking an immediate right past the Balnoon Inn.
- 12 Stay on this road to Lelant and then back to St Ives.



Stuff we like

The *BikesEtc* team picks out its favourite items featured in this month's issue...



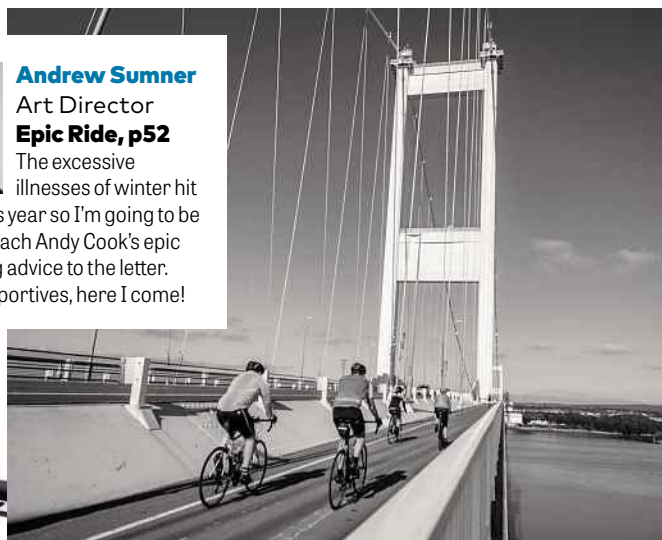
Nick Solderinger
Editor
Rapha Brevet Jersey, p58

Just a beautiful bit of kit. I'm a bit of an old Mod at heart and this cycling top reminds me of classic cycling jerseys of the past. It's got a very '60s vibe. I reckon Tom Simpson would have dug it, daddio.



Andrew Sumner
Art Director
Epic Ride, p52

The excessive illnesses of winter hit me hard this year so I'm going to be following coach Andy Cook's epic ride training advice to the letter. Watch out sportives, here I come!



Craig Cunningham
Editorial Assistant
Rolf Prima Ares 4 ES, p78

From uncommon spoke patterns to classy typography and customisable decals, these American wheels have style in spades. It also helps that they're incredibly fast.



Joseph Delves
Writer
Soma Smoothie, p83

In *Brave New World* Aldous Huxley wrote about Soma – a drug that hypnotises future Londoners. Well, this Soma's certainly hypnotised me!



David Kenning
Deputy Editor
Wahoo ELEMNT, p75

This nifty gadget caught my eye when our Craig let us all down by losing his cross-city race (p71). I've long been a Garmin user but this might win me over, not least for the way you can easily change the display on the move. 🚴

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COMPLETE SPRING TRAINING GUIDE





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WELCOME



As the old saying goes, everyone needs a plan, and here – with our compliments – is yours for getting fit for the season ahead. Whether you're aiming to make 2016 the year you finally break into racing, tackle your first century ride or simply lose

enough weight to get back into your favourite pair of jeans, this guide is designed to make that goal easier.

When we were putting this guide together, our aim was to make something to lead you through the often baffling world of sports science. To bust the jargon, spell out the truths, and leave you more clued up when it comes to your cycling fitness. Whether you're new to this lark or have ridden around the block a few times, I hope you enjoy what we came up with!

NICK SOLDINGER **EDITOR**



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DISCLAIMER

The health and fitness information presented in this book is intended as an educational resource and is not intended as a substitute for medical advice.

Consult your doctor or healthcare professional before performing any of the exercises described in this book or any other exercise programme, particularly if you are pregnant, or if you are elderly or have chronic or recurring medical conditions. Do not attempt any of the exercises while under the influence of alcohol or drugs.

Discontinue any exercise that causes you pain or severe discomfort and consult a medical expert.

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THE 10 COMMANDMENTS OF SPRING TRAINING

Don't just dive in, set yourself up properly to get spring training off to a flying start

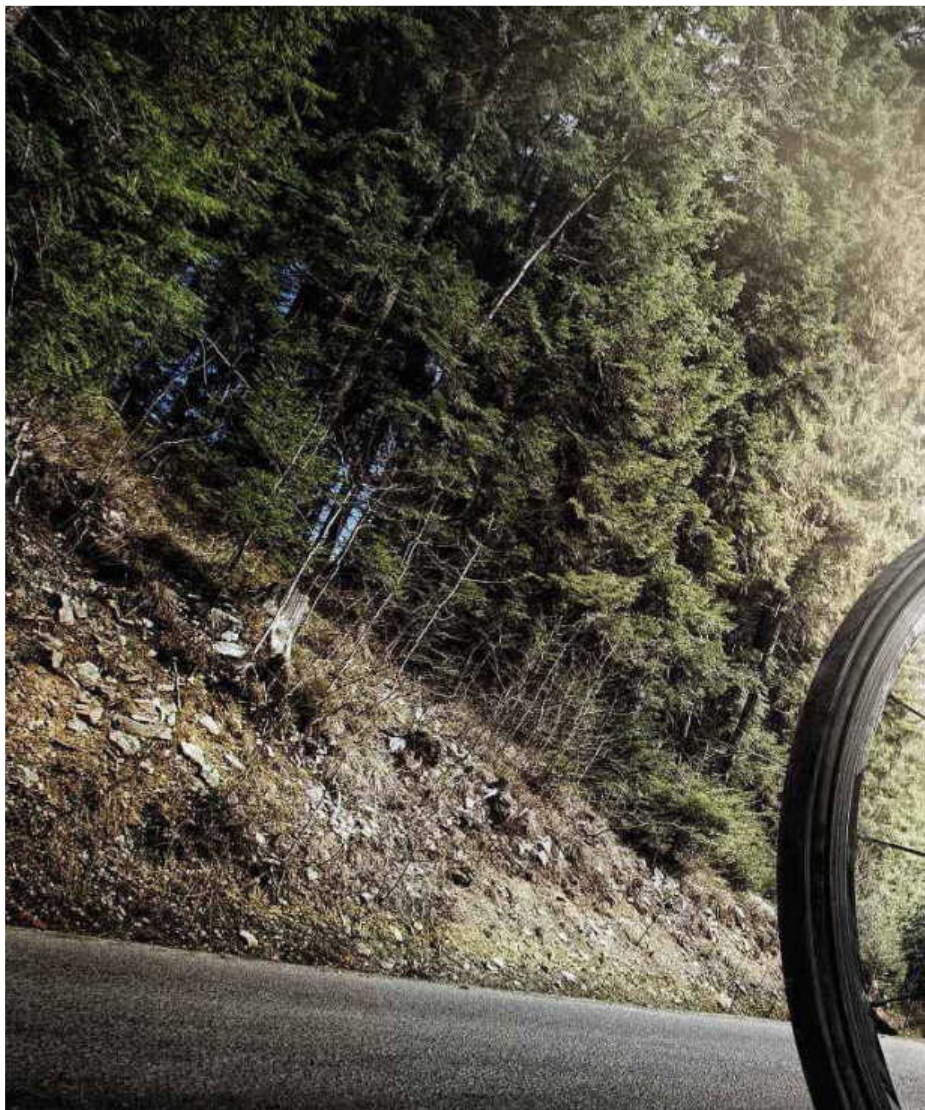
01 Pamper your ride

If your bike's been stuck in the garage since the last wet and muddy Sunday jaunt of 2015, it's time to give it the equivalent of a spa day. Here's your to-do list...

- i) Strip your frame down, clean it and wax it.
 - ii) Check for play in the bottom bracket, replace if necessary (do it yourself if it's an external bb, or get the bike shop to do it if it's a pressfit kind).
 - iii) Check your headset for play or tightness.
 - iv) If gear and brake cables are over a year old, replace them. Do this *before* the next step.
 - v) Put new bar tape on your drops.
 - vi) If your wheel hubs have cup-and-cone type bearings, clean and grease them.
 - vii) Straighten or true your wheels (see page 114 of this issue of *BikesEtc* to see how).
 - viii) Clean, lube and adjust brakes. Remove debris from brake pads; replace if very worn.
 - viii) Clean your pedals, check cleats for wear.
- If you don't fancy doing this yourself, take it for a professional service – see page 22 for more.

02 Keep a diary

No, not one where you reveal your innermost ponderings but one that records your rides and turbo sessions. By recording duration, frequency and intensity of training, you'll be able to set goals and see improvements, as well as whether you're over/undertraining. You should also record how much sleep you're getting, resting heart rate and weight; always check the last two at the same time of day – eg first thing in the morning.



03 Don't ignore your core

While there's no real substitute for time in the saddle if you want to be a better cyclist, doing certain off-the-bike exercises will improve not just your fitness but ultimately your technique. Your core muscles make up the trunk of your body from just above your knees to the top of your ribcage, both front and back. They include everything from your glutes (backside) and quads (thighs) to your abs (stomach muscles) and your lats (back muscles). Make these rock solid – see page 20 for exercise suggestions – and you'll be more stable in the saddle. Less wobbling means greater efficiency while pedalling, which in turn means greater endurance. It's a win-win!

04 Have a plan

Training without a plan is a bit like setting off on a journey without a map – you won't know what direction to take. A plan – like the easy to follow, eight-week one you'll find in this guide on page 25 – will help keep you focused, and allow you to build your fitness in a steady, safe way that'll help you reach your goals effectively. Yes, we know the kids/the other half/work (delete where applicable) can have a habit of getting in the way, so the key is to remain flexible. Remember: plans can always be changed, so don't get grumpy and ditch the whole thing if you miss a couple of days, just work out how best to switch things around.



05 Use a heart rate monitor

If you don't already own one, seriously think about making the investment. Why? Because this useful bit of kit can provide you with objective stats to help you quantify your training intensity. Simply measuring how fast you're going isn't accurate enough. Think about it, you could easily get up to 50kmh tucked in behind other riders on a downhill without turning the pedals. By the same token, doing 15km in a hour might look appalling but won't necessarily take into account the fact you were struggling up a 12% gradient in a force 10 headwind. A heart-rate monitor will give you a clear idea how hard your body is working. And you can pick one up for as little as 30 quid.



06 Don't forget to stretch

Even dedicated cyclists in the UK spend a lot of the winter months inside sofa surfing and with many of us working in offices, sitting is something we do an awful lot of when it's cold. The result? Your lower back muscles, your quads and your hamstrings all become shortened and tight. So make sure you stretch regularly and especially before leaping back into the saddle using the suggestions outlined on page 18 of this guide. Oh, and invest in a foam roller. These solid foam tubes which you basically lie on and roll back and forth, can help break down muscle knots in your back or your legs. It'll only set you back about a tenner – not bad for what's effectively a personal masseur. ➔



07 Mix it up

It's wondrous how quickly the body can adapt to whatever routine it's introduced to, and getting out there and hitting the roads regularly will soon have your fitness levels soaring. But remember, exercise is another word for test, and if your body isn't being tested, it isn't improving. Make sure variety is at the heart of your exercise plan and you'll be certain to promote growth – both in your physical power and your performance. Recognise your weaknesses and work on them. If you prefer endurance riding, work on your speed. Hate climbs? Train your body to conquer them. Most cyclists spend more of their time working on what they already do well. If you don't know what your weaknesses are, ask your ride buddies – they'll be sure to tell you. Mix your routes up, too – it'll keep things interesting for both your brain and body.

08 Ease yourself in

Spring knee may sound like something a trampolinist would suffer from but it's a fairly common ailment among cyclists. A form of tendinitis, it feels like nails being driven into the top of your kneecap. For a pedalhead at least, this condition usually comes about when you try to go for too many miles too soon after a winter layoff – although you can also get it by overdoing it with the weights down the gym. To swerve getting injured make sure you build in some easy active recovery days, keep rides shorter and easier at the start of your plan, increasing your mileage by no more than 15-30% per week.



09 Get a bike fit

Even if you've had one before, it's a good idea to have a professional fitter check your bike set-up – if not at the start of every season then at least

once every couple of years. The more you ride, it figures that the fitter and more flexible you'll become, and this will have a bearing on your position on the bike. Your cycling goals might also be different to previous years, which means you may want to ride in a different way. There's also the unavoidable fact of ageing to take into account – our body changes as we get older and this can affect our comfort and performance on the bike. Whatever the reason, there are loads of good excuses to treat yourself and your ride to a check up. If you've never had one, you could potentially notice a significant improvement in both your power output and performance when you do. After all, if it's good enough for the pros...

10 Chill out

Yes, we know you may have spent the whole of winter on your backside guzzling too many sweets and boozing, but never underestimate the power of rest, especially when you start riding again. Long, hard rides break down muscle and connective tissue and these need time to repair themselves, so make sure that you build in at least one complete rest day into your plan to give your body the time it needs to get over what you've done to it. If you don't, you risk injury – and nobody smart ever deliberately set out to injure themselves exercising. 🚲

WHY YOU NEED TO TRAIN

The key to success?
Why, setting goals of course!

SMARTER



No matter how much you train, at some point you are going to reach the limits of your potential as age and genetics come into play. That's not to say that you can't dramatically improve your fitness and – as you reach your full potential – feel fantastically alive.

Setting yourself big goals for the year – committing to a particular sportive, say – is a great way to stay motivated. You'll want to ensure that your fitness peaks at just the right time, but setting yourself smaller goals along the way will make that journey much more manageable.

Fitness professionals often use the acronym SMARTER when talking about this aspect of training: Specific, Measurable, Agreed, Realistic, Time-Phased, Exciting and Recorded. Let's see how it can help you...

SPECIFIC

Targets need to be specific to your ability and your aims. Be clear about what you want to achieve – whether it's to complete a century in a specific time, lose a certain amount of weight or generate a certain amount of wattage.

MEASURABLE

If you have specific goals, whether you reach them or not is something that can be clearly measured. Have a distance, time or even adventure to aim for and you'll know once it's tackled whether you've hit your target or not.

AGREED

Whether you ride with mates, a cycling buddy or a club, share your goals with others. Big challenges require big sacrifices and those around you will be more likely to support you if they understand your aims. You're also more likely to stay motivated because nobody likes to be seen to back away from a challenge!

REALISTIC

It's important that your goals are achievable. It might not be wise to enter, say, the Tour de Mont Blanc (330km with 9,000m climbing) if you've never ridden more than 50km before. That's not to say be timid but by reaching for things you can achieve, it's easier to stay motivated and when you achieve them, grow in confidence about taking on tougher challenges.

TIME-PHASED

If you have clear deadlines, you'll have a much better chance of hitting your goals. And if you fail, they can help you understand why: it might be down to laziness but it also might be down to the goals not being reasonable, which will mean readjusting your ambitions in future.

EXCITING

You need to be buzzing at the prospect of achieving your goal. If, for example, the idea of being cheered over the finishing line of that big sportive doesn't fill your veins with electricity, you'll find it hard to stay motivated. You need to want it, and want it badly. So pick a goal that puts a hummingbird in your ribcage.

RECORDED

Make sure you have a frequent visual reminder of your goal – for example, scribble it down on a Post-It note and stick it in your wallet or on your bathroom mirror, or put it on a to-do list.

To put this list into action, work through it backwards. Write down your goal, make sure it's what you really want, then look at the time available to see if it's realistic. You can then put a timetable together to achieve your agreed, measurable and specific target. That timetable will then break down the journey towards your goal into manageable chunks, which you can then work through and methodically tick off. 🚴

Achieving your goals will give you greater confidence



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HOW TO

TRAIN

The principles of training explained... and its jargon busted! ➔



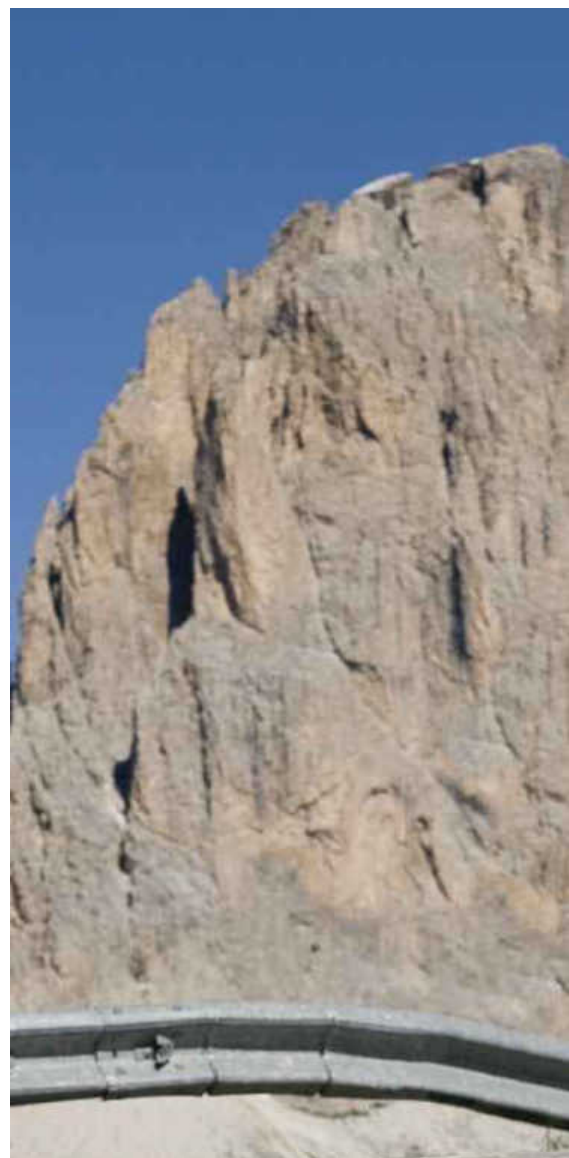
THE BASICS

The more you ride, the fitter you get. And the fitter you get, the longer, and more often you'll be able to ride. Simple, right? Well, as with most things in life, there's a little more to it than that. If you train more effectively, you'll maximise your fitness and that, in turn, will unlock your true cycling potential. To achieve that, first you need to get your head around a few basic principles of training.

You can break your cycling fitness down into three main parts – strength, speed and stamina. How you fully develop any of these is in large part down to your genetic make-up. Sure, Sir Bradley Wiggins put in an obsessive amount of training over the years to have been able to ride 54.5km in a single hour last year, but his genes ultimately decided whether his body could be developed in such a way to make breaking the Hour record possible. Most of us will never come close to riding at Wiggo levels, but that's not to say we can't improve immensely as a cyclist by focusing on how frequently, intensely and for how long we exercise, and by constantly monitoring the results.

To power a bike efficiently, you need to develop not just specific muscles to get those pedals turning, but crucially your body's engine room – its cardiovascular system. Your heart and lungs play a key role in transmitting oxygen around your body, feeding your muscles with the fuel they need to keep working. The three Ss can all be developed in the gym, on a cross-trainer or through alternative complementary exercises like cross-country skiing, but there's no real substitute for saddle time. If you want to be good at cycling, it's a no-brainer that you need to spend time riding a bike, developing the necessary muscle groups through the relevant movements. It's what fitness experts mean when they bang on about 'specificity' and it applies to any sport.

Fitness can be developed in the gym but there's no substitute for saddle time



THE TRAINING EFFECT

Another phrase you'll hear a lot from burly chaps in tracksuits is 'the training effect'. Without getting too technical, this refers to specific changes in your body in response to a specific training programme. In cycling that programme can focus on any of the three Ss – for example speed for sprinting, strength for climbing and stamina for riding long distances. In all three instances, though, you'll be inhibited or limited by fatigue. Exercise necessarily damages muscles. During intense activities like sprinting or climbing, that fatigue can manifest itself in an intense build-up of

lactic acid in your muscles that becomes so painful it forces you to stop, while cycling long distances can literally wear your muscles out, also forcing you to stop.

The human body is one of nature's greatest masterpieces, however, and your muscles have the capacity not only to mend themselves after being broken by exercise but to regenerate themselves while at rest so they're stronger than before. Strong enough, in fact, to cope with the demands of the exercise you've just subjected them to, and they'll keep doing so in response to exercise until they eventually reach their

genetic peak. This process of stronger rebuilding is known as overcompensation.

With that in mind, the key to improving your overall fitness is in balancing the level of exertion, both in terms of intensity and duration, with the right amount of rest. Too much exercise will excessively damage your body and will require longer periods of rest. Exercise before your body has recovered properly and you'll find yourself falling foul of excessive fatigue. Similarly, if you have excessively long periods of rest between exercising your muscles will begin to atrophy or waste away.



ADAPTATIONS

When we train, we seek to improve our fitness and therefore our performance. These improvements are what coaches and personal trainers call adaptations. These are brought about by training and if that training correctly follows the holy trinity of training principles – namely overloading, progression and rest/recovery – then you'll maximise your training adaptations.

Let's take a look at each one of these three processes in turn to see how you can implement them for best results...



OVERLOADING

In simple terms, overloading simply means to push yourself beyond your comfort zone, and overloading – as opposed to overtraining – is vital for building up your body as you push it towards optimal fitness. So how do you overload effectively? Many riders make the mistake of merely thinking more is better. It isn't. Just piling on more high-intensity intervals, say, will lead to early burn out and can have a damaging effect not just on your muscles but also on your motivation. So what's the best way to overload? By using the principle of progression...





PROGRESSION

Progression in training merely means to increase your training load over a period of time. A successful training programme is one that is undertaken over a specific period of time. The plan you'll find on page 25 of this guide, for example, is an eight-week programme. Whenever you

start a new training programme, you need to ease yourself into it, to avoid injury or burnout, and then progressively push your body harder. So start slowly and then gradually increase the frequency of your rides, the duration of your rides and the intensity of your rides by riding faster. You

also need to mix it up. Repeatedly doing the same exercise over and over again won't really test your body, which will very soon adapt to the demands of a given exercise. This is a common mistake made among many cyclists and while you won't become any less fit, your fitness will plateau.

To avoid injury, ease yourself into training and progressively increase ride intensity



REST AND RECOVERY

Carefully planned rest periods are a vital part of an effective training programme. As is sometimes reducing the amount of exercise you're doing to avoid overtraining your body. Overtraining can leave you feeling knackered, grumpy, and unable to sleep properly. It can also leave you with stiff, heavy muscles, more prone to injury and infection, and can even affect your appetite and libido.

As well as ensuring you build proper rest periods into your training schedule, you also need to protect your body and help it to recover quicker. In the first instance, this means making sure you're properly hydrated both before and during sessions on your bike. But it also means aiming to replenish muscle glycogen – which is the primary fuel your muscles use for energy production – through food.

The sooner you can eat after a ride the better – you should ideally aim to have got something down your throat within two hours. You'll need a mix of quality carbs, lean protein, heart-healthy fats as well as fluids. Full-fat Greek yoghurt is ideal post-workout grub as it contains lots of protein, carbs and healthy fats. Mix it with fruit. Not only will you get some added carbs but the enzymes in them help break down nutrients, allowing them to be delivered to your muscles more quickly. Kiwi, for example, is great for breaking down amino acids – essential for muscle repair – while pineapple has anti-inflammatory properties that'll also help soothe tired muscles. Alternatively, grab a post-workout recovery drink or bar from a health food store.

Other things you can do to help relieve tired legs include wearing compression garments, relaxing in a hot tub or treating yourself to a massage. You may think this all sounds quite lazy and indulgent but fail to take rest and recovery as seriously as you do the other two sides of your training triangle and you'll be wasting your time. Literally. Why? Because it's in this stage when the adaptations actually take place, as your body rebuilds itself, overcompensating in the process. 🚴





IN THE ZONE

How to measure your training intensity

When you're training, you need to constantly assess and adjust what you're doing to ensure you get the most from every session. One of the easiest ways you can measure your performance and your improvements is to use a heart-rate monitor, as your heart rate is a useful marker of both your basic level of fitness and the intensity of your effort while training. As a rule of thumb, the lower your heart rate, the fitter you are – unless, of course, you've got no heart rate!

As your fitness improves, your heart will get stronger, which has a profound knock-on effect for the rest of your fitness because it will be able to pump more oxygen-bearing blood around your body to your muscles with every beat. This in turn means you'll be able to produce greater levels of power, and as an added bonus, you'll recover more quickly, too. As time goes on, you'll find your resting heart rate lowers as well, while your energy levels rise.

TRAINING ZONES

There's a myriad of formulas out there that are used by cyclists to help calculate training efforts. No two human bodies are alike, so it figures that not everyone's body is going to conform to one particular sports scientist's equation. But even without a team of white-coated experts behind you, you can get a reasonably accurate picture of what's going on in your body while you ride.

One method, widely recognised as being among the most useful, was pioneered by Loughborough University's Director of Sport and the man who coached Chris Boardman to Olympic glory, Peter Keen CBE.

Keen's formula uses a maximum heart rate figure (MHR) which is found by an exhaustive

test such as sprinting flat-out up a hill, using a heart-rate monitor (see box opposite). Using the figure produced by this test, your individual training zones are calculated by subtracting a percentage from your MHR. The equation is simple: to discover a percentage merely take your MHR multiply it by the percentage you're looking for then divide by 100. For example, if MHR is 160 beats per minute (bpm) 30% of MHR would be $(160 \times 30) / 100 = 48\text{bpm}$. Each zone is designed to draw a different physiological response from your body. So what are these zones, and how do they work?

Recovery Zone

This zone consists of a very light, low-intensity workout and is carried out over a relatively



Training with a heart-rate monitor

If used correctly, heart-rate monitors can really help improve performance. Sensors strapped to your chest or your wrist measure your heart rate and send the information to a computer (either a watch-style one worn on your wrist or a compatible bike computer such as the Garmin Edge range) which will display the data on its screen.

This can help you form a more objective opinion on how to quantify your training intensity. Simply using speed over distance can never be as accurate – riding at 50kmh might look impressive on paper, but less so if it's downhill with a strong tailwind. Similarly, a rider who only manages 15km in one hour might look like the numbers of someone who's coasting, but not if they're climbing up Mont Ventoux!

short time. As such, it causes no significant adaptations, as it isn't designed to result in any fatigue. Working in this zone helps accelerate recovery from injury.
Heart rate: More than 40% below MHR.

Zone 1

Improves fat metabolism and prepares your body for harder training. While riding in this zone, you should be able to talk easily without growing short of breath.
Heart rate: 40-35% below MHR.

Zone 2

Improves your body's ability to use oxygen, produce power, and increases efficiency.
Heart rate: 35-25% below MHR.

Zone 3

As you push yourself that little bit harder still, you'll find your breathing becomes harder and faster, and it won't be as easy to talk while you ride. This is the zone that will really start to build your sustainable aerobic power by developing cardiovascular fitness.
Heart rate: 25-18% below MHR.

Zone 4

Training at this level is intense and you'll find your training efforts restricted to between 30 and 60 minutes. With the muscles under increased stress, they'll switch their main fuel source from fat to carbs, so regular carb intake is essential in this zone.
Heart rate: 18-11% below MHR.

Zone 5

You will now be riding very close to your limit, and so will find you'll only be able to ride at this pace for 14-40 minutes. With extreme demands being placed on your cardiovascular system, you'll be breathing deeply and capable of only brief speech.
Heart rate: 11-6% below MHR.

Zone 6

You'll now be training anaerobically as opposed to aerobically. That means your blood can't get oxygen to your muscles fast enough. This is where you will develop deep muscle power but don't expect to keep it up for more than a few minutes at a time.
Heart rate: Less than 6% below MHR. 🚴

OUT-OF-THE-SADDLE EXERCISES

16 home-gym moves that'll make you better on a bike

Stretches

Warming up and warming down properly after a ride or exercising in general doesn't just help you to avoid injury, it also helps prepare your body for action and for recovery. So you may think skipping stretches will save you a few minutes but what you're actually doing is making your workout harder and less effective.

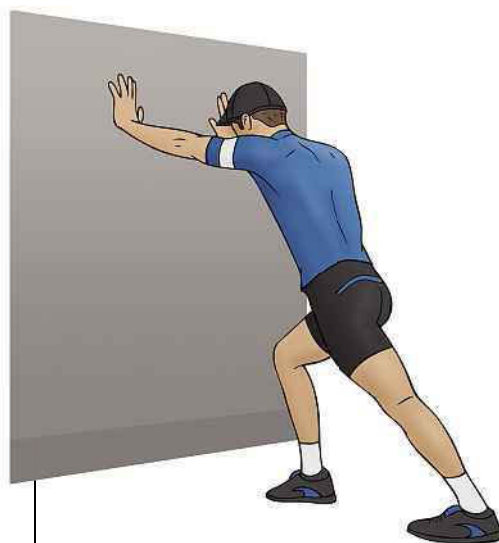


01 Neck

Standing or sitting with an upright posture, lower your chin towards your chest until you feel a stretch in the muscles at the back of the neck. Hold for 5 secs and repeat five times.

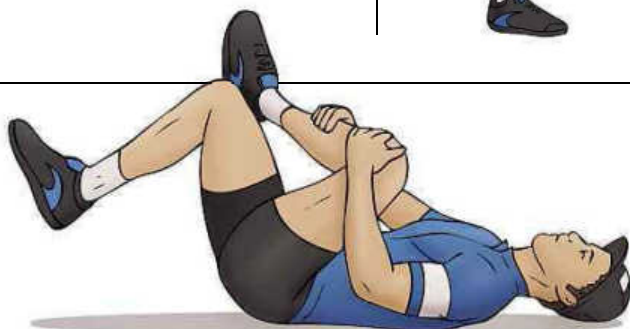
02 Hamstring stretch

Extend your left leg in front of you with your heel touching the ground and toe pointing up. Bend your back leg and keep your knees together, lightly supporting your upper body with your arms on your upper thigh. Hold for 15-20 secs and return to the start position. Repeat on the other side. Do this five times on each side.



03 Calf stretch

Stand with your hands on a wall with your legs in a staggered stance. Shift your weight to your back foot until you feel a stretch in your calf. Hold for 15-20 secs and return to the start position. Repeat on the other side. Do this five times on each side.



04 Glutes stretch

Lie on the floor with your knees and hips bent. Cross your left leg over your right so that your left ankle sits across your right thigh. Grab your left knee with both hands and pull it toward your chest until you feel a comfortable stretch in your glutes. Hold for 15-20 secs then return to the start position. Repeat on the other side. Do this five times on each side.

Foam-roller exercises

Foam rollers are great. Cheap (they start at around a tenner) and easy to use, they're designed to massage tired or strained muscles and are particularly useful in targeting your hard-working quads, hamstrings, glutes and hips. They're also awesome for loosening out your spine and relieving tight back muscles. Get one, we promise you won't regret it!

WITH EACH EXERCISE, ROLL THROUGH THE AREA AT ONE INCH PER SECOND AND REPEAT FOUR TIMES

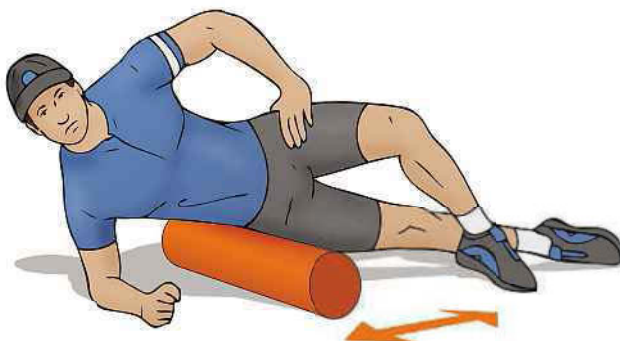


01 Quads

Lie on your front, resting your weight on your elbows as if you were down on tri-bars and keep looking forward. Rest both thighs on the roller and roll back from your knees to your hip. Increase the pressure by lifting one thigh off.

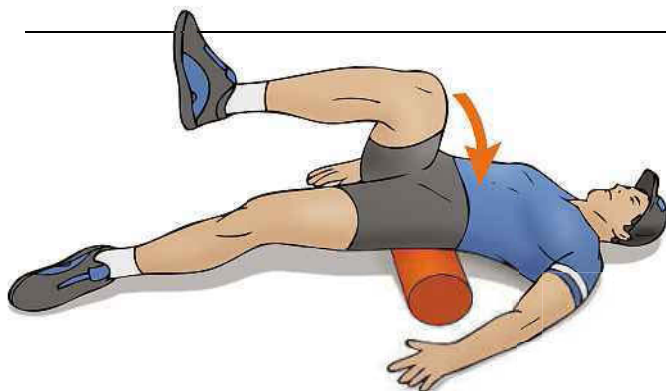
02 Hips

Lie on your left side with your weight on your left arm. Keep your left leg straight and bend your right leg. Place the roller beneath your left hip and roll backwards and forwards. Repeat on the other leg.



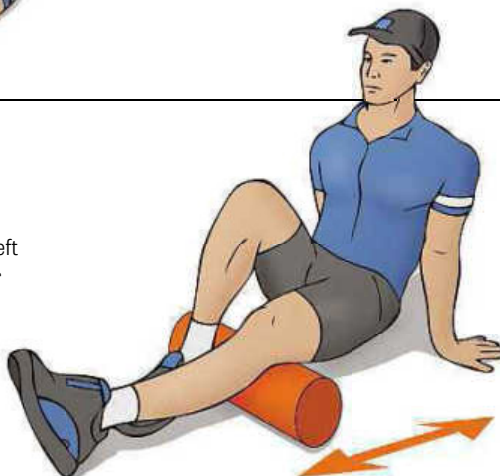
03 Back

Lie on your back with the roller under your left hip, right leg bent. Rotate your right leg over your left hip to apply pressure to the TFL (tensor fasciae latae muscle) – problems in this area can cause lower-back pain (but avoid rolling your lower back as it can lead to injury).



04 Hamstrings

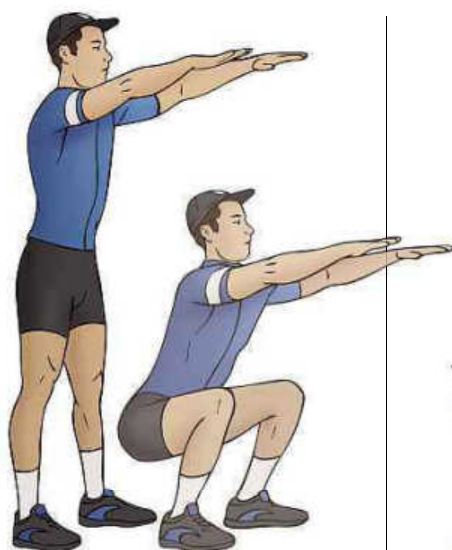
Adopt the seated position with your left leg stretched out, right leg bent, and the roller placed beneath your left thigh. Then roll back and forth up the length of your hamstring. Repeat on your other leg.



Core exercises

Great for your core, these bodyweight exercises are perfect for working your body without risk of injury. For maximum benefit, clench your buttocks and tighten your abs while performing these. For a full workout, do all four moves in sequence, starting with five sets of 15 reps of each, building up to 10 sets, with 60-90 secs recovery between each set.

DO THESE FOUR MOVES IN SEQUENCE. START WITH FIVE SETS OF 15 REPS OF EACH, BUILDING UP TO 10 SETS

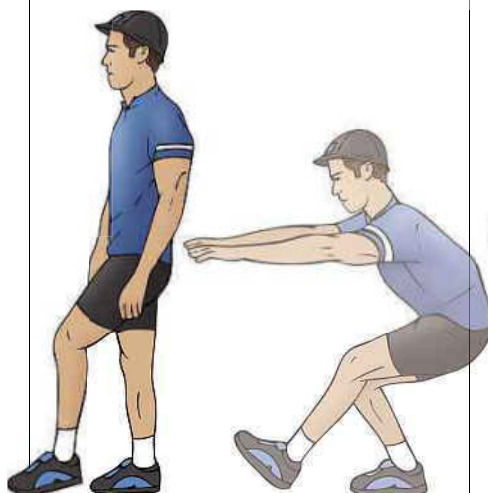


01 Squats

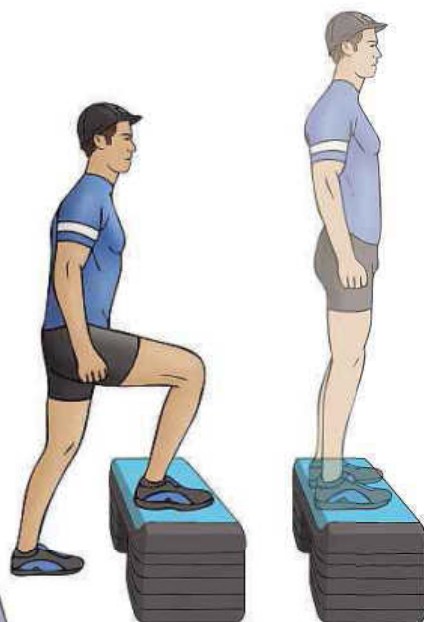
Squats are one of the best exercises you can do to strengthen your leg muscles, including your quads and hamstrings – both big powerhouse muscles for the cyclist. This move helps loosen tight calves too. With your feet shoulder-width apart and your arms out in front of you bend at your hips and knees and squat down until your thighs are parallel to the floor. As you advance or it becomes easier increase difficulty by holding a kettlebell to your chest during the move. Clench and tense throughout.

02 Single Squat

Balance on one foot with the other foot raised in front of you. Squat down, pushing your weight through your heel, keeping the elevated leg off the floor. After 15 reps, repeat on the other leg. Clench your buttocks and tense your abs while you descend, loosening them again as you rise back up.



Use squats to strengthen leg muscles

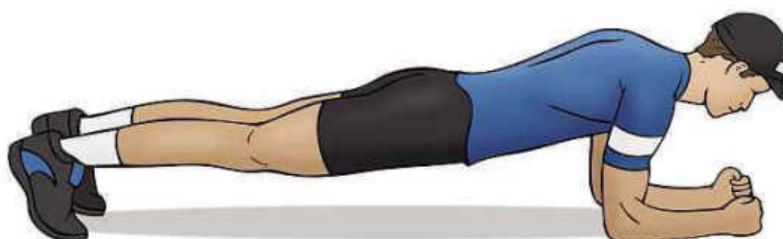


03 Step ups

Stand in front of a step or bench and place your left foot firmly on the step. Push your body up until your left leg is straight, driving up for extra power. Once your right foot hits the step, step back down and repeat. Clench and tense as you step up, loosening your muscles again as you step down.

04 Plank

Lie on your stomach and place your elbows under your shoulders with forearms and hands on the floor. Lift hips off the floor, keeping your back straight, resting on your toes. Hold for 60 secs. Clench and tense your muscles throughout.



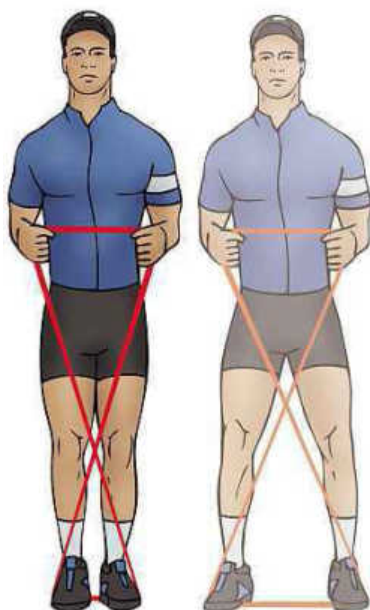
Resistance Tube Training

Resistance tubes are rubber marvels. You can pick one up online for less than a tenner, making them an ideal and highly affordable addition to a home gym. They're great for improving both the strength and flexibility of a cyclist's quads and hamstrings, and are widely used by the pros for out-of-the-saddle workouts.

DO THREE SETS OF 8-10 REPS OF EACH EXERCISE, WITH 60-90 SEC RECOVERY BETWEEN EACH

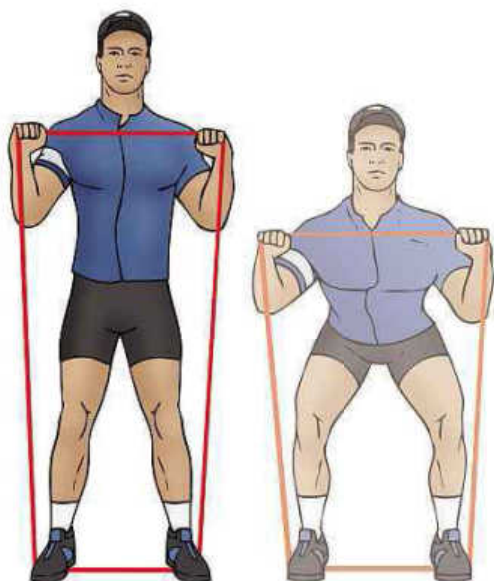
01 Band Walk

With feet together, stand on the stretch-cord, grabbing each end in the opposite hand. With elbows kept in and hands apart, spread your legs apart by walking, not sliding.



02 Standing Rows


With feet shoulder-width apart, hold the stretch-cord with palms facing in, down at hip height and arms straight. Then simply lift the cord to around neck height. Keeping elbows high.

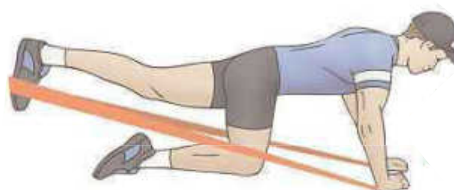


03 Squats

With feet shoulder-width apart and the stretch-cord beneath both feet, squat down, keeping your back as straight as possible, and hands around shoulder height. Then return to a standing position. Try to keep your back straight.

04 Leg Extensions

Kneel on all fours with the stretch cord in each hand and the middle of the cord wrapped around your right foot. Lengthen your right leg, keeping everything else still. Then bend your right leg toward your bottom, again keeping composed. 





NOW GET YOUR BIKE FIT!

To really get the most out of this season's cycling, you need to make sure your ride's in great shape, too!

New season! New you! New bike! OK, the last point might be a bit of an ask, but there's no reason why you can't give your bike a proper overhaul and get it looking and riding good-as-new. Things you might want to look at range from changing brake pads, through to stripping your bike down to its frame, cleaning and greasing everything and putting the whole thing back together. After all, just as with a car, regularly servicing your bike will not only keep it moving smoothly it'll prolong the life of its moving parts – and that'll save you a fortune in the long run.

Now, if you're the type who loves clanging and banging about in your garage then the DIY route's obviously the way to go. But what if you're more like the *BikesEtc* team and would rather be out riding your bike than stuck inside fixing it, what are your options? Well, you can either ask a mate to do it (good luck with that!) or you can treat your ride to a professional service from someone like CycleSurgery.



You may know CycleSurgery for their quality kit and gear – including all the cleaning products – you'll ever need to spruce up your ride. But they're also basically a magic wand you can wave if you want your bike back in peak condition but haven't got the time or chops to do it yourself. Their business employs a crack squadron of qualified mechanics who can make sure your machine is given an expert level of attention, and with 32 stores nationwide there's bound to be one nearby – see cyclesurgery.com to find out.

At the very least you should take advantage of their Bike Health Check – a great free service that offers real peace of mind – not least if your bike's been buried at the back of the shed all winter. Otherwise they've got four excellent levels of paid-for service which we've outlined here. All you need to do is pick one, book your bike in (depending on the time of year you'll need to book about a week ahead) then drop your bike off for a same-day return. All prices quoted are labour only, if your bike requires a replacement part, the mechanic will call personally to discuss options.

CHECK AND TUNE

For a mere 30 quid, a qualified mechanic will give your bike a thorough examination, adjusting gears and brakes for optimum performance, ensuring your tyres are properly inflated, and undertaking minor repairs like changing worn-out brake pads. If there are any more serious issues, the mechanic will also point these out to you and advise you how best to remedy the problem.

GENERAL SERVICE

This one costs £60 and depending how much time you spend in the saddle, would ideally be carried out every three to six months. So what do you get for your money? Well, pretty much your whole bike will be checked and spruced

Regular servicing will save you a fortune in the long run



up. Your drivetrain will be removed and cleaned in a parts washer, before being re-installed and lubed. Your wheels are cleaned, checked for damage and adjusted so that they run straight and true. And your brakes cleaned and checked. Brakes and gears will then be adjusted and the bike test-ridden to ensure all performs as it should. Chain, mechs and cables will all be lubed and the whole bike tightened up.

FULL SERVICE

This one is about as comprehensive a service as you can get without taking your bike to bits and rebuilding it, and it's recommended you have it done annually. For 90 quid, a mechanic

will do everything that you get in the General Service but you'll also get all inner cabling replaced, your seatpost regreased, and your hubs adjusted. Your bottom bracket bearing and headset will be removed, cleaned and checked before being refitted with fresh grease. In short, your bike will get a thorough seeing to. Don't expect to break down any time soon after this one!

ULTIMATE ADVANTAGE

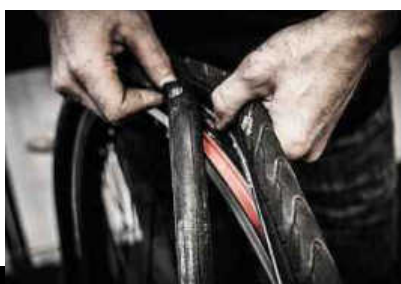
And this is the one where they do strip your bike down to the frame and rebuild it! Book this and basically they'll fix and clean everything right down to replacing your bar tape and – if you've got them – bleeding your

hydraulic brakes. Your wheel hubs will also be stripped and rebuilt with fresh grease and bearings. This one costs £120 but what you'll be picking up when you go back to the shop is effectively your beautiful bike reborn!

OTHER SERVICES

CycleSurgery have also got your back if you happen to have an emergency. Wander into any of their stores with a puncture or a broken chain and their mechanics will make sure you get home. In fact, their mechanics even put time a side each day just to look after folks whose bikes have let them down. Which wouldn't happen, of course, if they were serviced properly in the first place!

■ Go to cyclesurgery.com to find out more about Cycle Surgery's range of services and products.



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THE ROAD CYCLIST'S MONTHLY HANDBOOK – STUFFED WITH
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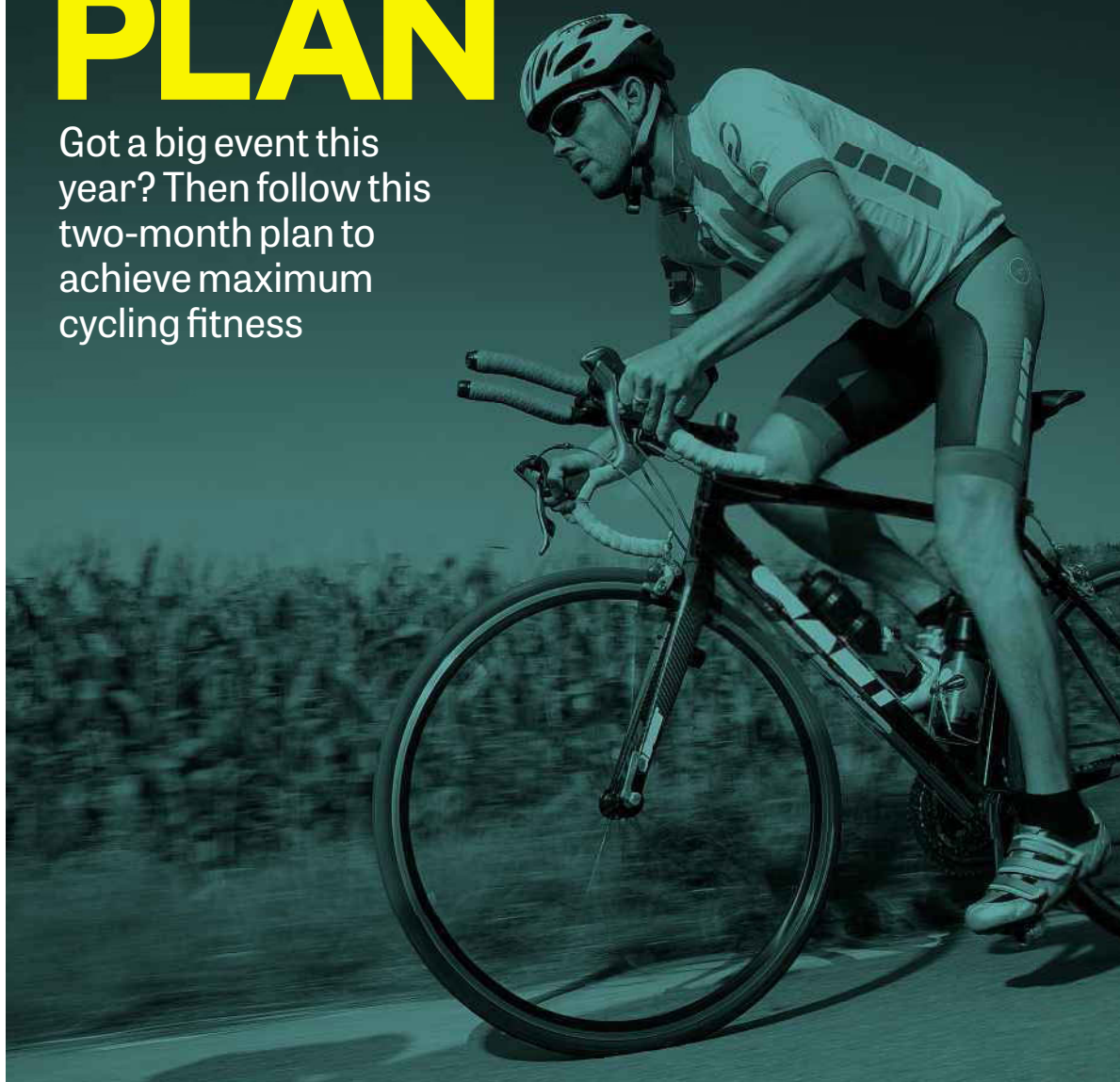
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YOUR 8-WEEK TRAINING PLAN

Got a big event this year? Then follow this two-month plan to achieve maximum cycling fitness



INTRODUCTION

BACK TO BASICS

Meet the coach and find out how to make the most of this training plan



PAU BRYAN

is a professional British Cycling Level 3 coach, who is the current Kent Best All Rounder and former Kent 12-Hour Time-Trial Champion. He specialises in constructing training plans

tailored to the individual, taking into account all of their needs, strengths, weaknesses, commitments and goals and giving them a plan that will ensure they reach their full potential. This is a plan Pav devised specially for *BikesEtc* and is aimed at beginners and intermediates who are looking to build their fitness in preparation for a sportive. To find out more about Pav, visit pavbryan.com



All sessions can be performed indoors or out

HOW TO USE THE TRAINING PLAN

Testing Protocol

Start with a max heart rate test: warm up thoroughly and then put in a maximal effort. This can be a hill climb of around 3 mins or the hardest effort you can achieve on a static trainer for that duration. Cool down afterwards.

Timing

Throughout the week, sessions last an hour to an hour and a half. Weekend sessions are longer. Sessions can be swapped round to fit into your schedule but I strongly recommend riding no more than three days consecutively.

In or Out

All sessions can be performed indoors or out (testing should be inside, though). If replacing a group ride with an indoor session (when conditions make it too dangerous to go out, say), halve the duration but keep the intensity the same.

Warm-up and cool-down

Your warm-up should be at least 10 mins, progressing cadence and heart rate before starting main session – 20 mins for Zone 4 (Z4) sessions – with cool-down being the reverse.



WHY YOU NEED TO **WARM UP AND DOWN**

It's tempting to not bother with this pre- and post-ride ritual, and just get out and start riding, but you do so at your peril

Bicycles were invented 170-odd years ago, while humans were invented around two million years ago, which means none of us were actually born to ride – not even Sir Bradley Wiggins. Consequently, cycling can wreak havoc on your body, with bad bike postures being responsible for untold injuries.

That's why it's essential to warm up properly before you ride hard, so your muscles are warm (the clue's in the name) and ready for action. 'A dynamic warm-up can help avoid injury,' says sports therapist Ian Holmes, a soigneur at UCI Pro Continental team Madison-Genesis. 'The body is an amazing thing, but it will let you down eventually

at an amateur level. I'd recommend using functional movements such as forward lunges [see below], or doing a brief stint on some rollers.'

Post-ride, you should stretch again, ideally as soon as you get off the bike. 'It certainly helps avoid injury, especially when the muscles are still warm,' says Holmes. 'Tiny sections of muscle remain contracted, and stretching helps iron these out.'

Another way of helping avoid injury is by getting a regular sports massage. 'I don't treat that many injuries – my work is more about maintenance and injury prevention,' says Holmes. 'I identify the areas that are likely to suffer more strain during exercise.'



Pre-ride warm-ups

LUNGES

Stand with your legs shoulder-width apart and your hands by your side. Take a long stride forward with your left leg and bend your knee until your back knee almost touches the floor. Pause and return to the start. Repeat with your right leg, making sure the knee of your leading leg never travels further forward than the toes of the corresponding foot. Do this 10 times on each side.

SPINNING

The best warm-up is riding slowly. This can be 20 minutes on your bike, on a turbo or on rollers. A gentle

spinning warm-up will fire up the right muscles and get your body used to being in the riding position.

SPINNING WITH A TWIST

If using rollers, try working through the gears, or ride one-handed, alternating between your left and right hands and different hand positions (on the tops, the hoods and the drops). As your confidence develops, you can try more advanced techniques such as taking things out of your jersey pocket or putting them back. This will make the warm-up more interesting while also helping you to develop your cycling skills.

>>> For post-ride stretches see page 18.



WEEK 1

MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	SUNDAY
Testing	Rest	2x (15mins Z3 & 15mins Easy)	Easy hour	Core (see page 20)	Group Ride 3 hours	2 hours Base

Total duration on bike: 8.5 hours

Focus: Testing – understanding training zones and/or intensity, setting goals, knowing your weaknesses

MONDAYS

Predominantly a rest day as most people will have more time at weekends to ride – recovery is key to allowing your body to adapt

WEEK 2

MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	SUNDAY
Rest	3x (10mins Z4 & 10mins Easy)	Easy hour	2x (10mins Z3, 5mins Z5 & 10mins Easy)	Core (see page 20)	Group Ride 3 hours	2 hours Base

Total duration on bike: 9 hours

Focus: Progression – training needs to be progressing and challenging, without pushing you into an injury or illness, focus on clean eating from whole foods, high-quality protein for recovery and healthy fats

TUESDAY (Z4)

Predominantly Zone 4 (threshold work) this is a harder session – your heart rate will be 82-89% of max

WEEK 3

MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	SUNDAY
Rest	2x (20mins Z4 & 10mins Easy)	Easy hour	2x (10mins Z3, 10mins Z4 & 10mins Easy)	Core (see page 20)	Group Ride 4 hours	2 hours Base

Total duration on bike: 10 hours

Focus: Overload week – designed to shock your body into adapting, this should feel hard to complete but know your limits. Back off if you feel ill or like you may suffer an injury

WEDNESDAY (EASY)

Easy – an easy hour to hour and a half. Focus on high-cadence efforts while keeping heart rate no higher than 75% of max – a great opportunity to brush up on pedalling technique or other basic skills (balance, for example)

WEEK 4

MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	SUNDAY
Rest	Easy hour	Easy hour	Core (see page 20)	Easy hour	Testing	Group Ride 3 hours

Total duration on bike: 7 hours

Focus: Recovery – first recovery week, allowing your body to adapt to training. Use this time to put finishing touches on planned event. Also progress testing to ensure training is having the desired effect. Use some of the sessions to brush up on technique

THURSDAY (Z3)

Predominantly Zone 3 (tempo work) – this is still a harder session but slightly less than Z4, heart rate will be 75-82% of max

WEEK 5

MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	SUNDAY
Rest	3x (10mins Z4 & 5mins Easy)	Easy hour	2x (15mins Z3 & 10mins Easy)	Core (see page 20)	Group Ride 3 hours	2 hours Base

Total duration on bike: 8.75 hours

Focus Gentle – no rushing back to full-training week after taking it easy. You need progression in your training and hitting it hard after taking it easy can result in injury or illness

FRIDAY (CORE)

Core – having a strong core will help with balance, co-ordination, application of power, as well as giving benefits off the bike. These sessions also serve as rest days from the bike to allow legs to recover and adapt

WEEK 6

MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	SUNDAY
Rest	4x (10mins Z4 & 5mins Easy)	Easy Hour	2x (15mins Z3, 5mins Z4 & 10mins Easy)	Core (see page 20)	Group Ride 3 Hours	2 Hours Base

Total duration on bike: 9 hours

Focus More Progression – same reasoning as week 2, this week bridges the gap between relatively easy & quite hard, and should be easily achievable

SATURDAY (GROUP)

Group ride – at beginner/intermediate level, the skills, techniques and encouragement will progress your fitness and performance far more than riding solo. Join a club, focus on correct group riding skills and etiquette

WEEK 7

MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	SUNDAY
Rest	2x (20mins Z4 & 10mins Easy)	Easy hour	2x (15mins Z3, 10mins Z4 & 10mins Easy)	Core (see page 20)	Group Ride 4 hours	2 hours Base

Total duration on bike: 10 hours

Focus: 2nd Overload week – designed to shock your body into adapting, this should feel hard, but know your limits and back off if you feel ill or like you may suffer an injury

SUNDAY (BASE)

Base – this should feel easy, you should be able to hold a conversation. This is a perfect time to perfect your pacing and nutrition strategy for your target event. Keep it steady!

WEEK 8

MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	SUNDAY
Rest	1x 10mins Z4 & 1x 10mins Z3	2x 4mins Z4 & 2x 4mins Z3	Rest	2x 3mins Z4 & 2x 3mins Z3	2x 2mins Z4 & 2x 2mins Z3	Event

Total duration on bike: 4 hours plus event time

Focus: Event/Recovery – easier (2nd recovery week) or ‘taper’ week, leading into target event. This is your final chance to ensure your bike and kit bag are ready, making final preparations for the event itself, with fitness coming to a peak

WEEKEND RIDE #1

It's important that there is at least one group ride at the weekend and one low intensity. These can be interchanged – for example, the group ride can be at base intensity and shorter with the other ride covering the remaining elements 🚴

HOW TO EAT

Fuelling your body is as important as maintaining your bike. So make sure you do it properly by following this simple advice





YOURSELF HEALTHY

As no exercise plan can be truly effective if it's not used in conjunction with a healthy balanced diet, you might as well use your newfound motivation to get back in the saddle to switch things up in your kitchen, too. And if you don't believe diet is one of the most important factors in improved performance, consider this: the single best way to get faster is (whisper it) to lose weight. Yes, having the right bike is important. Yes, using a heart-rate monitor to measure your marginal gains makes sense. But when your legs, heart and lungs have five

**If you have
five kilos less
to haul up the
hills, you'll find
them easier**

kilos less to haul up the hills or around a course, they are going to find it easier, and your performance is going to improve.

The wholefood truth

Of course, the exercise in and of itself will help you lose that weight but you could make it a hell of a lot easier by thinking twice about what you fuel those rides with. One great bit of advice that's worth trying to live by is to eat whole foods rather than processed food. That means filling your shopping basket with fresh fruit and vegetables, lean cuts of fresh meat, and oily fish such as mackerel. What it means avoiding is pre-prepared meals (which are often rammed full of calories in the form of added sugar, as

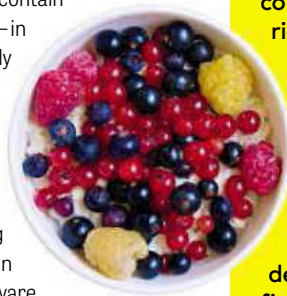
well as unhealthy levels of salt), snacks, sweets, fast food, and fruit smoothies. No, really.

The roughage with the smoothie

Like fruit juices (both fresh-pressed and those made from concentrate), fruit smoothies are spilling over with sugar. Yes, it's from a natural, whole food source but the liquidising process essentially extracts the sugar from the fruit's fibre, which is then discarded. What you're left with is a drink that can contain six teaspoons of sugar – in some cases surprisingly more. A 2014 survey revealed that one well-known coffee chain produced a fruit smoothie that contained a staggering 23 teaspoons of sugar in a single serving. So beware.

Similarly, watch out for foods that purport to be light or low fat. Many of these are actually higher in sugar than their full-fat equivalents – manufacturers stuff them with sugar to compensate for the lack of taste that occurs when fats are removed. Fat is actually a key food group, along with carbohydrates and protein. While it should be the food group that you consume least of your calories from, it's still essential for a healthy metabolism. Not only is it a source of essential fatty acids – such as omega-3 – but you can't actually absorb vitamins A, D and E without the help of fats. Just make sure the fats you consume are the healthy kind, which means unsaturated rather than saturated fats. You'll find these in olive oil, rapeseed oil, avocados, oily fish, almonds and nuts such as Brazil nuts.

In other words, eat like an Italian – plenty of fresh fish, fresh veg and fresh fruit – and you'll soon be pedalling like one.



What to eat before/ during/after a ride

Performance nutritionist Martin MacDonald on the best foods for success in the saddle

■ 'Before a long or intense session, choose a meal that contains carbs such as oats or rice. Porridge made with whole milk, some coconut oil, a few cashew nuts and a handful of berries is ideal.'

■ 'During the ride, don't forget to take on fluids. I advise water only (with or without added electrolytes, depending on the heat) for the first hour or two. Then, if needed, opt for a carb-loaded drink. A ready-made sports drink with 6g carbs per 100ml is good – any higher can trigger stomach upsets. Make your own by mixing water with maltodextrin powder.'

■ 'After the ride, if you've been on the bike for over three hours and haven't had any protein, have a whey protein shake to initiate the body's muscle repair and adaption process.'

■ 'Later, aim for a balanced recovery meal.' 🚴



CYCLING: BY THE NUMBERS...

500

The number of calories you can expect to burn off in an hour on your bike

Number of minutes of exercise per day it takes to boost your metabolic rate

30

76.2

THE PERCENTAGE OF PEOPLE WHO HAVE EXPERIENCED A REDUCTION IN OBESITY AFTER TAKING UP CYCLING

3

Number of workouts per week you'd need to do to significantly combat mild to moderate depression

7

The number of minutes your life is supposedly extended for every minute of exercise

50

PERCENTAGE OF PEOPLE WHO'VE SEEN THEIR BLOOD PRESSURE DROP BECAUSE OF CYCLING



58%

The amount your risk of developing type 2 diabetes drops when you cycle 30 minutes a day

58.7

The percentage of people who have experienced a reduction in asthma as a direct result of cycling


14%

The amount your risk of developing heart disease drops if you do five 30-minute rides a week

50%

Reduction in your risk of catching a cold this year if you cycle 30 minutes a day

19%

The amount your risk of early death drops if you do five 30-minute rides a week 



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